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# **Science & Technology**

***USSR: Science &  
Technology Policy***

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## SCIENCE & TECHNOLOGY

### USSR: SCIENCE & TECHNOLOGY POLICY

## CONTENTS

### FACILITIES, MANPOWER

Session of General Assembly of USSR Academy of Sciences (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	1
Session Meetings	1
Aleksandrov Speech	3
Ligachev Speech	7
Statements of Assembly Participants	15
Marchuk Speech	20
Marchuk Biography	22
Kotelnikov Speech	24
Assembly Declaration	36
Improvement of Remuneration of Scientists (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	37
Proposed Procedure of Changing Charter of Academy of Sciences (V.L. Ginzburg; VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	41

### AWARDS, PRIZES

Khlopin Prize Awarded to A.S. Nikiforov, V.S. Koltunov (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	50
---	----

Supreme Soviet Awards to Workers of Science (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	51
Gold Medals, Nominal Prizes of Academy of Sciences for 1987 (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	159

#### BIOGRAPHIC INFORMATION

Nikolay Mikhaylovich Druzhinin Obituary (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	163
Aleksandr Iosifovich Shalnikov Obituary (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	165
Aleksandr Mikhaylovich Prokhorov (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	167
Andrey Viktorovich Gaponov-Grekhov (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	169
Aleksandr Fedorovich Belov (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	171
Sergey Timofeyevich Kishkin (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	172
Ivan Lyudvigovich Knunyants (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	174
Gadzhi Gamzatovich Gamzatov (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	176
Aleksandr Stepanovich Khokhlov (VESTNIK AKADEMII NAUK SSSR, No 11, Nov 86) .....	178

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SESSION OF GENERAL ASSEMBLY OF USSR ACADEMY OF SCIENCES

Session Meetings

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 3-5

[Article under the rubric "The Session of the General Assembly of the USSR Academy of Sciences": "At the Meetings of the Session"]

[Text] The session of the General Assembly of the USSR Academy of Sciences took place on 16-17 October 1986 in the assembly hall of Moscow State University imeni M.V. Lomonosov. The question of the progress of the fulfillment by the Academy of Sciences of the decisions of the 27th CPSU Congress and the implementation of the decree of the annual General Assembly of the USSR Academy of Sciences, which was held on 19-21 March 1986, was on the agenda. Member of the Politburo of the CPSU Central Committee and Secretary of the CPSU Central Committee Ye.K. Ligachev and Secretary of the CPSU Central Committee M.V. Zimyanin took part in the work of the session.

The question of the election of the president of the USSR Academy of Sciences was considered at the morning meeting of 16 October. Having opened the meeting, Academician A.P. Aleksandrov addressed to the assembly the request to free him of the duties of President of the Academy of Sciences. Vice President of the USSR Academy of Sciences Academician V.A. Kotelnikov reported that in connection with the request of Academician A.P. Aleksandrov the Presidium was offering as a candidate for the post of president of the USSR Academy of Sciences Academician G.I. Marchuk and was submitting the corresponding question for the consideration of the General Assembly.

The members of the Presidium and the associates of its staff, V.A. Kotelnikov said, learned with profound regret about the desire of Anatoliy Petrovich Aleksandrov to leave the position of president. During his work in this post the USSR Academy of Sciences and Soviet science as a whole had advanced greatly. The prestige of science increased, its contacts with practice had grown stronger, and new forms of interrelations with industry were developed. Much labor and the organizing talent of A.P. Aleksandrov were invested in all this.

Describing the candidacy of Academician G.I. Marchuk, V.A. Kotelnikov emphasized that after the detailed consideration of the question it was



unanimously advanced by the Presidium. Guriy Ivanovich Marchuk is a world-famous scientist. His specialty is mathematics, moreover, not some narrow direction of theoretical mathematics, but the broad field of applied mathematical disciplines which are capable of helping the representatives of the most diverse fields of science and practice. The large amount of experience in the organization of science, which was gained by G.I. Marchuk in a quarter century of work at the Siberian Department of the USSR Academy of Sciences and in the position of chairman of the USSR State Committee for Science and Technology, is well known.

Vice President of the USSR Academy of Sciences Academician P.N. Fedoseyev delivered a report on the decision of the party group of the General Assembly of the USSR Academy of Sciences on the question of the election of the president of the Academy of Sciences. The party group rated highly the contribution of A.P. Aleksandrov to the development of Soviet science. His basic knowledge, great public prestige, and great organizing talent ensured the high level of supervision of the USSR Academy of Sciences. In the position of president A.P. Aleksandrov proved to be a worthy successor of Mstislav Vsevolodovich Keldysh, with whose name important successes of Soviet science are connected. Anatoliy Petrovich was always amazing for his broad knowledgeability about the state of affairs in all fields of science and at the most diverse scientific institutions, be it in the center or in outlying areas. He examined thoroughly both the essence and the slightest details of the scientific problems being discussed. He is most closely linked with practice, with industry, and with the needs of the national economy and the defense of the country, to which he devoted very much attention. The party group considers it necessary to express to Anatoliy Petrovich Aleksandrov sincere gratitude for the great contribution which he made to the development of the Academy of Sciences and all science as a whole.

In nominating Academician G.I. Marchuk for the position of president, the members of the party group are convinced that he, in turn, will prove to be a worthy successor and continuer of the best traditions of his predecessors. Guriy Ivanovich has for this all the necessary data. He is successfully combining basic research and its application, both in connection with his own scientific interests and in the role of an organizer of science. The experience of his work as chairman of the Siberian Department of the Academy of Sciences was further reinforced in the high state position of deputy chairman of the USSR Council of Ministers and chairman of the USSR State Committee for Science and Technology. A broad scientific outlook is combined in him with attention to everything new and advanced, demandingness is combined with a benevolent attitude toward personnel. In his scientific and public prestige and understanding of the present problems of scientific and technical progress and the needs of the national economy he completely satisfies the requirements of the times. The party group unanimously recommended Guriy Ivanovich Marchuk for the position of president of the Academy of Sciences of the Soviet Union.

Member of the Politburo of the CPSU Central Committee and Secretary of the CPSU Central Committee Ye.K. Ligachev spoke at the session. The statements of Academicians B.Ye. Paton, A.M. Prokhorov, A.A. Dorodnitsyn, V.A. Koptug, and Ye.I. Chazov, who supported the candidacy of Academician G.I. Marchuk for the

position of president of the USSR Academy of Sciences, then followed. They gave a high rating of the scientific, organizing, and state activity of G.I. Marchuk.

The General Assembly of the USSR Academy of Sciences made the decision to meet the request of Academician A.P. Aleksandrov on his freeing from the duties of president of the USSR Academy of Sciences, having left him on the Presidium of the Academy of Sciences, and, taking into account his great services and many years of fruitful activity, to express gratitude to him. Further the assembly turned to the procedure of election. Academician V.S. Vladimirov, chairman of the Accounting Commission, announced the results of the secret ballot. Academician G.I. Marchuk was elected president of the USSR Academy of Sciences. V.A. Kotelnikov expressed congratulations on his election to G.I. Marchuk, who after this gave a short speech.

Vice President of the USSR Academy of Sciences Academician V.A. Kotelnikov gave the report "On the Progress of the Fulfillment by the USSR Academy of Sciences of the Decisions of the 27th CPSU Congress and the Implementation of the Decree of the General Assembly of the USSR Academy of Sciences of 20 March 1986." Then Corresponding Member of the USSR Academy of Sciences A.S. Khokhlov, deputy chief scientific secretary of the Presidium of the USSR Academy of Sciences, informed those who had gathered about the progress of the implementation of the suggestions on the work of the academy, which were submitted by the members of the USSR Academy of Sciences at the previous General Assembly. Then the discussion of the report of V.A. Kotelnikov took place.

President of the USSR Academy of Sciences Academician G.I. Marchuk delivered the concluding speech. (Footnote 1) (The statements in the discussion on the report of V.A. Kotelnikov, as well as the concluding speech of Academician G.I. Marchuk will be published in the first issue of VESTNIK AKADEMII NAUK SSSR for 1987) At the conclusion of the work of the session those who had gathered unanimously adopted a declaration, in which the position of the Soviet leadership at the meeting of M.S. Gorbachev and R. Reagan in Reykjavik is supported.

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#### Aleksandrov Speech

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 6-8

[Speech by President of the USSR Academy of Sciences Academician A.P. Aleksandrov at the session of the General Assembly of the USSR Academy of Sciences on 16 October 1986 under the rubric "The Session of the General Assembly of the USSR Academy of Sciences": "The Opening Speech of President of the USSR Academy of Sciences Academician A.P. Aleksandrov"]

[Text] Comrades! I have worked for many years in the lofty position of president of the USSR Academy of Sciences, to which you promoted me, but now I am no longer able to cope with all the duties which have to be fulfilled in this position.

You know that my immediate specialty--atomic power engineering--is now going through a very critical period, which is connected with the major accident at the Chernobyl Plant. This direction to a significant degree is connected with my activity, and great responsibility for it rests with me. Therefore, I had to address to the CPSU Central Committee the request to free me from the position of president of the Academy of Sciences, so that I could devote my remaining years entirely to my immediate cause--the development of atomic power engineering in our country. In the Central Committee they treated my request with great attention and understanding.

I cannot particularly reproach myself for the fact that something at the Academy of Sciences in these 10 years developed not as it should have. In this time the influence of the Academy of Sciences on the development of many sectors of our industry and on the acceleration of scientific and technical progress increased substantially. It was possible to correct many shortcomings both in the structure of the academy and in the directions which we were developing. Of course, this is not my service, but a result of the constantly increasing attention to the Academy of Sciences on the part of the CPSU Central Committee and the government and the intense labor of all the members of the Presidium of the Academy of Sciences, all academic institutes, and, in any case, the overwhelming majority of them. For example, owing to the very vigorous activity of Ye.P. Velikhov we succeeded to a considerable degree in rectifying the situation which had formed in our country with computer technology and information science. Owing to the work of our mathematicians--here the role of A.N. Tikhonov is especially great--the most advanced computing methods, which completely correspond to the world level, were developed in our country. In recent years computer technology itself and its element base were also developed, although here many omissions still remained. The general approaches to the designing of computers--high-performance computers, computers of the average class, and small computers--are also being improved. Here it is necessary to note the work which is being performed at the Siberian Department under the supervision of G.I. Marchuk jointly with industrial ministries. Yu.A. Ovchinnikov made a very large contribution to the development of biological science and biotechnology in our country. In the area of biotechnology, biochemistry, and genetic engineering much work was performed at the most advanced level. However, here, too, there are still very great omissions which we should eliminate.

As a whole the great harm, which at one time was done to our biology and cybernetics, has now been offset, and in science we have attained the most advanced level in many directions. Unfortunately, for the present it is impossible to say the same thing about technical directions. In order to bring them up to the required level, it is necessary to strengthen the technical base of the Academy of Sciences.

Many new directions in the field of communications were developed owing to the work of V.A. Kotelnikov and the institute which he heads. Among them first of all it is necessary to note the most advanced direction--the development of fiber optic devices for communications and for many fields of instrument making and technology. We also have here good initiatives and advanced technological developments, but do not yet have mass production. Production

has to be supplied with advanced equipment and advanced technology has to be developed. This is our immediate task.

The fact that the academy restored its former role in the work on mechanics and machine building and its scientific potential in this field, which at one time we had to a significant degree lost, proved to be very important. We succeeded in getting back the institute, which at one time had been turned over to industry, and in organizing a department under the supervision of K.V. Frolov, who is now developing very vigorously this comparatively new direction for the academy--the increase of the reliability and technical level of our machines.

Such an advanced technology as powder metallurgy has advanced substantially in our country. And here I should note our joint work with the ministries of ferrous and nonferrous metallurgy and with the Ukrainian Academy of Sciences. In this direction B.Ye. Paton is working successfully and much important work has been performed by V.I. Trefilov. However, here, too, we have not yet achieved the level which we had to achieve.

Here scientific research work has been conducted on a broad scale, in many instances both technologies and the necessary materials, which conform to world standards, were developed. However, all this concerns laboratory developments and experimental technologies, and not industrial production. This section has not yet been completed.

Until recently joint work here was implemented in accordance with one-time orders: some ministry, which was interested in the development of work in one direction or another, jointly with us examined the question and allocated a specific financial and technical potential, while we allocated our collective. For the most part good cooperation was organized, and several operations advanced quite vigorously. Here I should note, in particular, the work of many, many of our institutes of the chemical type.

But at times it was also necessary to organize the work on a broader basis--with the participation of several departments. Then it was frequently not possible to introduce technical ideas in industry: it was difficult to adequately interest all the participants.

An important step toward the establishment of new forms of the transfer of developments from the scientific and technical sphere to industry was recently taken. The idea of establishing interbranch scientific technical complexes was advanced. It was assumed that such complexes would improve the possibilities of introducing works and would expedite both the development of research itself and especially the commercial application of its results. Now in accordance with a decision of the party Central Committee and the government the Academy of Sciences has been ordered to organize a number of such complexes and to take part in the work of several others, in which industry itself should play the leading role. We should have organized such complexes in nearly all directions.

The very organization of interbranch complexes was a complex process. Initially it was proposed that a significant number of production enterprises

should be transferred to the system of the USSR Academy of Sciences. I remember how G.I. Marchuk and I discussed this situation. It was clear to us that if the question were settled in this manner, serious conflicts would arise between academic and industrial organizations and nothing would come of this matter. And at that time we proposed the form which now should also be developed, contributing to the acceleration of scientific and technical progress in our country. However, this is not a simple process, and we will need much assistance of the CPSU Central Committee, the government, and, of course, industrial ministries--for the present we have not found common ground and genuine forms of cooperation with all of them. This is also my fault. It turned out that the basic work on the organization of interbranch complexes coincided precisely with the complication of the situation in atomic energy, and I was unable to devote proper attention to it.

Such a president of the Academy of Sciences, who is closely linked with industry and has received adequate experience of work in the industrial organizational sphere, will cope better with it. And at this moment, when we should be working on the main task assigned to us by the Central Committee--the acceleration of scientific and technical progress--I do not see a more suitable candidate for the lofty position of president of the USSR Academy of Sciences than Guriy Ivanovich Marchuk.

I will say a few words about my quite lengthy acquaintance with Guriy Ivanovich. It began during the period of the development of atomic engineering. At that time computer technology also began to be developed in our country. And its first steps were very successful. Methods of designing nuclear reactors were developed quite rapidly in Obninsk, where Guriy Ivanovich was working at that time. The design methods and their possibilities at that time were frequently underestimated--this was at that time a completely new matter. I remember that I came to Guriy Ivanovich in Obninsk, and he showed me multigroup reactor physics calculations. After this we sent there our own specialists, and owing to the initiative and research of Guriy Ivanovich this work received an important stimulus.

Subsequently together with M.A. Lavrentyev Guriy Ivanovich from the very start took upon himself immense labor on the organization of the Siberian Department, and then, after the departure of Mikhail Alekseyevich, assumed the burden of its management.

During those years the Siberian Department advanced a large number of technologies, which then began to be used very extensively in our country. Precisely at that time Guriy Ivanovich acquired quite invaluable experience, which did not yet exist at the union academy: the large-scale participation of science in the development of industry.

I believe that we should use this experience of Guriy Ivanovich, having elected him to the lofty position of president of the USSR Academy of Sciences.

In conclusion permit me to note the invaluable assistance in work, which the members of the staff of the Presidium of the USSR Academy of Sciences gave me. I should specially mention the enormous support of my assistant Natalya

Leonidovna Timofeyeva, who had to work not less than 12 hours daily. In general, it seems to me that a very good and friendly style of work has been established in our Presidium.

I would also like to thank the many directors of institutes, who were always responsive to my requests and quickly set to work on the questions which it was necessary to settle promptly.

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#### Ligachev Speech

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 9-15

[Speech by Member of the Politburo and Secretary of the CPSU Central Committee Ye.K. Ligachev at the session of the General Assembly of the USSR Academy of Sciences at Moscow State University imeni M.V. Lomonosov on 16 October 1987 under the rubric "The Session of the General Assembly of the USSR Academy of Sciences": "The Speech of Member of the Politburo and Secretary of the CPSU Central Committee Ye.K. Ligachev"]

[Text] Dear comrades! As you already know, Anatoliy Petrovich Aleksandrov has requested the CPSU Central Committee to relieve him of his duties as president of the USSR Academy of Sciences. The Central Committee Politburo, having considered Anatoliy Petrovich's statement, has deemed it possible to satisfy that request.

For more than 10 years Anatoliy Petrovich Aleksandrov has headed the USSR Academy of Sciences. We have all justification for stating that, while he was in that position, Anatoliy Petrovich, together with the presidium, did much to develop Soviet science and to bring many of its areas up to the front rank. Thanks to the close interaction between theoretical and applied research, which Anatoliy Petrovich has always worked energetically to promote, the Academy of Sciences expanded its influence in many spheres of society and has been exerting a profound effect in moving our country forward. Anatoliy Petrovich, as a Communist Party member, scientist, and administrator, serves as an example of a responsible attitude to the job assigned to him, of high probity, and of patriotic service to the motherland. He has rightfully earned high authority in science and the deep respect of our country's public. The Central Committee Politburo has expressed to him a sense of gratitude and appreciation for his leadership of the Academy of Sciences.

The question about the president has arisen naturally. In this regard, the Central Committee has carried out meetings with many academicians. Yesterday there were sessions of the academy presidium and the party group of academicians and corresponding members. The Central Committee Politburo recommends as president of the USSR Academy of Sciences Guriy Ivanovich Marchuk. The members of the academy presidium and the academicians consider him to be a worthy candidate for that position.

Comrade Marchuk is a major scientist in the field of mathematics, atmospheric physics, geophysics, and nuclear-reactor physics. A special place in his scientific creativity is occupied by computer mathematics.

G.I. Marchuk's exceptional talent as a scientist and an organizer of science manifested itself completely during his assignment at the Siberian Department of the USSR Academy of Sciences. He was the first director of the Siberian Department's Computer Center and headed it for more than 15 years. Within a short period of time, the collective at the Computer Center occupied a leading place both in our country and throughout the world with regard to a number of important trends in applied mathematics.

G.I. Marchuk's organizational capabilities developed especially during his assignment as chairman of the Siberian Department of the USSR Academy of Sciences. Actively perceiving everything that is new in science and taking a creative approach to questions of planning and administration, the Presidium of the USSR Academy of Sciences Siberian Department, which at that time was headed by M.A. Lavrentyev and G.I. Marchuk, with the participation of the Siberian oblast and kray party organizations, headed the creation and implementation of the large-scale Sibir (Siberia) comprehensive program, which was aimed at the accelerated development of the economy in this region that is so important for the country's development.

At the present time Comrade Marchuk is continuing to carry out scientific work and heads the Computer Mathematics Department of the USSR Academy of Sciences. While in the position of deputy chairman of the USSR Council of Ministers and chairman of the USSR State Committee for Science and Technology, G.I. Marchuk applied a large number of efforts to develop and carry out state comprehensive target programs dealing with the most important trends in the development of science and technology within the confines of both our own country and the CEMA.

G.I. Marchuk is a Communist Party member, a CPSU Central Committee member, USSR Supreme Soviet deputy, and a state figure. As secretary of the party's Tomsk and Novosibirsk Obkoms, and engaging in the organization and development of major scientific centers in Novosibirsk and Tomsk, I dealt constantly with G.I. Marchuk and other eminent scientists. I would like to emphasize that he possesses such personal qualities as the ability to penetrate deeply into the essence of problems, the ability to grasp that which is most important, and to consolidate people in the work process, openness and honesty, and high moral principles.

In a word, G.I. Marchuk combines within himself the features of a major scientist possessing a broad horizon, and an organizer of large-scale science. For the present day stage in the development of science, when it is facing the task of the technical reequipping of the national economy, this is especially important.

The party's Central Committee hopes that you will put complete confidence in G.I. Marchuk and will elect him president of the USSR Academy of Sciences. Comrades! The entire life of Soviet society is currently proceeding under the effect of the ideas expressed at the party's 27th congress. The strenuous

work of the party and the nation in carrying out the decision of the 27th congress and the practical implementation of the strategy of acceleration and renovation constitutes the essence of the period that we are experiencing. The current restructuring of all relations in society is based on the use of the advantages of socialism and is being carried out for purposes of reinforcing and developing socialism.

It is already possible today to speak about the first results. The results of the first 9 months of the current year in the national economy have been summed up. The country's economy has achieved the highest rates of development in the past 9 years. But it is not just a matter of these results. Since the April plenum and the party congress, the entire social atmosphere has been changing for the better. In all areas of social life there has been an increase in discipline, organizational spirit, order, and, at the same time, democratism, more media honesty, and a broader field for initiative for people to apply their creative energy. This is simultaneously both the result of the practical implementation of the party's course aimed at restructuring, and a pledge of the successful resolution of the tasks that have been advanced by the 27th congress, tasks which are historic in scope and revolutionary in their essence.

The party cannot think of achieving the goals that have been set without a decisive increase in the role of science in society, without the effective use of our country's intellectual and scientific potential. This is influenced first of all by the requirements that evolve from the need for the complete intensification of social production, the guarantee of a new quality of economic growth, and the complete development of the individual. It is understandable that if we cannot achieve the outstripping and development of exploratory, fundamental scientific research, and if we cannot overcome the sluggishness in the materializing of scientific ideas both in the national economy and in other areas of activity, it will be impossible to cope with these tasks. That is why the intensification of the role of science, the decisive development of both its fundamental and applied aspects are the object of primary concern by the party and the Central Committee.

After the April plenum and the 27th congress, the CPSU Central Committee took serious steps with the intention of achieving a cardinal increase in the effectiveness in using the tremendous intellectual and scientific potential of Soviet society. I would like to mention a few of them. First of all, a strong impetus was given to the development of the social sciences. They have a special role in the life of our society. They form the unshakable ideological basis for the restructuring that is under way. A statement that is of key importance for increasing the effectiveness of scientific research in the field of Marxism-Leninism and for all our ideological work is the one made by Comrade Gorbachev at the recent All-Union Conference of the Heads of Social Sciences Departments in USSR Institutions of Higher Learning.

There has been a considerable increase in the state appropriations for science. The rates of their increase according to the 12th Five-Year Plan exceed by a factor of 1.5 the growth rates for the national income. This makes it possible to achieve a major reinforcement of the material base in science. Specific measures have been defined for accelerating the development



and production of instruments and means of automation for scientific research. These volumes will more than double by 1990, and will more than quadruple by 1995.

With the purpose of concentrating scientific forces and the material-technical resources in the resolution of the most important scientific and technical problem, 20 interbranch scientific technical complexes [MNTK] have been created. In 11 of them, the leading role is played by Academy of Sciences organizations. At the present time the MNTK are in the stage of development. There still exist a rather large number of problems and shortcomings, and the organizational period has been unjustifiably prolonged. The Central Committee has recently considered the questions related to this. The MNTK administrators, as well as the administrative workers of the ministries and departments and the Academy of Sciences, have been warned about their personal responsibility for the effective use of this fundamentally new form of interbranch integration of science and production.

The Central Committee and the government have taken major steps to develop branch science. It is necessary to mention first of all here the steps to achieve the fundamental improvement of the coordination of projects in the field of computer technology. The USSR State Committee for Computer Technology and Information Science has been formed. The decision was made to create the very large-scale Center for Information Science and Electronics, which include approximately 15 scientific research institutes [NII] and 10 experimental production enterprises. Steps are also being taken in the interests of developing the scientific sector of the machine building complex. The Department of Problems of Machine Building, Mechanics, and Control Processes of the Academy of Sciences has been substantially reorganized. The network of scientific production associations in the branches has been expanded.

Soviet science plays a leading role in implementing the Comprehensive Program for the Scientific and Technical Progress of the CEMA Member Countries for the Period to the Year 2000. In this regard, 12 academic institutes are acting as lead organizations. We proceed from the assumption that our participation in this program will serve the acceleration of the socioeconomic development of our country and the countries in the socialist community.

While attaching, for understandable reasons, great importance to the development of the applied scientific trends that open up the paths to the newest technological schemes and technical means, the Central Committee takes into complete consideration the fact that the achievement of stable results and the winning of solid positions are impossible without the further improvement of the state of affairs in the field of fundamental science.

At the June 1985 conference at the CPSU Central Committee on questions of the acceleration of scientific and technical progress, it was emphasized that "fundamental research is a matter that is of too critical importance to allow us to reconcile ourselves to any weaknesses or to allow any sluggishness or delays in extending them."

At the present time, on instructions from the party Central Committee, recommendations are being prepared for accelerating the development, by the USSR Academy of Sciences, of research in the priority areas of chemistry and chemical technological schemes, in the field of high-energy physics, and in mathematics. Simultaneously, steps are being developed to improve the working and everyday living conditions for the scientists. The academy's structure is being improved, and its centers in the country's economically important regions are receiving further development. Recently the Central Committee expressed its positive attitude toward the creation of the Urals and Far East Departments of the USSR Academy of Sciences.

Comrades, you will agree that, on the whole, during the year and a half that have elapsed since the April plenum, important work has been done to increase the role of science in society and in the resolution of the tasks of acceleration. But this is only the beginning. In order to reach the level required by our time, Soviet science, and primarily the academy science, will have to undergo major restructuring.

The academy has traveled a long path, of which it can truly be proud. Our academy has large merits, and it has made a considerable contribution to the development of the economy, to the reinforcement of our country's defensive capability, and to the formation of a communist philosophy in the minds of Soviet citizens. However, what we are talking about today is raising the academy's work to a qualitatively new level. Moreover, we have in mind not small-scale, partial improvements, but a fundamental change in the manner of actions, a fundamental turning point in all spheres of activity. That is how the party understands the essence of the restructuring.

It is necessary first of all to change over more decisively to the intensive path of developing science. Unfortunately, that transition is still being carried out, in many instances, by the extensive method. There has been an increase in the number of scientific and technical institutions and laboratories, and in the number of scientific workers. Yet the real return of all of this has been insufficient. Obviously one cannot create an intensive economy unless one has intensively developing science. That is why the sharp increase in the effectiveness of the work performed by every scientific collective, every institute, every laboratory, is a completely mandatory condition for the success of all our plans.

We must take bolder steps to increase the role of the regional departments of the academy, as well as the academies of sciences of the union republics. For that purpose it is necessary to expand their rights and, at the same time, to increase the responsibility sharply, to make stricter demands on them for the results of their developments. Two-thirds of the workers in the academy scientific sector are employed in the regions. This is a large potential and it must be used completely.

Large reserves can also be found in improving the coordination of the activities of various academy subdivisions, in improving the practice of long-term planning of research. With regard to long-term planning, the academy to a definite degree has lost the experience that it had. At the present time the academy, essentially speaking, does not have any long-term programs for a

number of promising areas in the development of science--if, of course, one does not consider the nationwide programs. It would seem that this situation should be corrected.

The existence of long-term plans opens up new opportunities for the broader creation, when resolving comprehensive scientific and technical programs, of mobile, temporary organizational structures that unite the efforts of the scientists in various areas. For the time being, this form of organizing the work is being used poorly. And yet we have examples that confirm the high effectiveness of this form. For example, scientists at the Leningrad Institute of Information Science and Automation of the USSR Academy of Sciences, jointly with specialists in industry, created a unique (that is, domestic, rather than based on any foreign analog) computer system that is on a par with the best worldwide models. These are the kinds of examples that we must multiply.

I would also like to emphasize that today especially great importance is attached to the research that is linked with guaranteeing the high reliability and security of using the latest technological schemes and technical means. The difficult lesson of Chernobyl has reminded all of us that indifference in this matter is inadmissible. I think the USSR Academy of Sciences must make its contribution to the resolution of this task.

The Central Committee is aware that the increase in scientific research in many instances is being restrained by the weak technical equipping of our institutes and by the weakness of science's material and technical base. I have already mentioned the decisions made for purposes of increasing the production of automation instruments and means for scientific research. This work will be continued, and we shall definitely move ahead the problem of providing science with instrument and technical support. A large responsibility for implementing the planned measures falls upon the USSR Academy of Sciences and the USSR Ministry of Instrument Making, Automation Equipment, and Control Systems [Minpribor]. There are other questions, including those of a social nature. The CPSU Central Committee and the government know about these problems, are ready to begin resolving them, and are awaiting the appropriate recommendations from the USSR Academy of Sciences and its Presidium. The Central Committee has in mind the complete examination, within the near future, of the problems of developing the USSR Academy of Sciences and defining the steps for resolving the critically important questions.

The chief link in the structure of academic science is the scientific research institute. It is precisely there that one sees the increase in new scientific knowledge, and the laying of the foundation for accelerating scientific and technical progress. It is there that the highly qualified scientific cadres are concentrated. Thus, the Institute of Radio Engineering and Electronics and the Physics Institute imeni P.N. Lebedev employ almost as many doctors and candidates of sciences as are employed in such national economic branches as the electronics industry and the communications equipment industry.

However, in a number of instances the work of the institute collectives has not been distinguished by the proper productivity. The academy's presidium

must analyze this and must achieve a situation in which every scientist produces the maximum return on his efforts. You will agree that it is very important for this purpose to reinforce the management of some of the academy institutes, to infuse fresh creative forces into them, and to increase their responsibility for the results of scientific labor. It is necessary to clear away all the roadblocks in the form of obsolete instructions and instructional manuals, to remove everything that hinders the scientific search, and to expand the rights granted to the institutes, departments, and laboratories. At the same time it is necessary to assure that the administrators and the scientific collectives make active use of the rights that already exist and that have been newly established.

The CPSU Central Committee feels that, on the whole, there is a health atmosphere of political morale in the USSR Academy of Sciences system. The scientists, by their everyday labor, maintain the party's strategic course aimed at acceleration and at the fundamental renovation of all aspects of social life. The overwhelming majority of scientific workers have been participating actively in the restructuring of our economy and the social sphere in the light of the decisions of the party's 27th congress.

At the same time, I would like to state directly that in the academy environment one still encounters undesirable situations that cause concern. In a number of scientific collectives there is obviously a shortage of publicity and of creative criticism and self-criticism as an accelerator of development. I would say that there is a shortage of adherence to principles, of reciprocal exactingness, of healthy intolerance toward undesirable situations. It sometimes happens that certain scientists in general consider themselves to be blameless and attempt in every way to avoid any constructive criticism. For that reason, in certain collectives one observes the creation of a situation of cliquishness or nepotism, an atmosphere of mutual admiration and excessive indifference.

In our society, in any of its spheres, the same laws, the same requirements operate for everyone. For us a sacred duty is the strictest observance of the Leninist principles of selection, placement, and education of cadres. Deviations from those principles, wherever they occur, are tremendously detrimental to the job at hand and, therefore, are inadmissible. The party's 27th congress proclaimed: not a single organization, not a single worker, must remain beyond supervision, beyond criticism. V.I. Lenin taught that we must "not hush up the weakness of our movement, but must openly criticize them, in order to get rid of them more rapidly and more radically." The party strictly follows Lenin's advice and the congress's guiding principles.

A critical task today is the task of providing the academy with fresh, young scientific replacements. Serious miscalculations have been made in this regard, and obvious disproportions have arisen.

Individual scientists do not consider it to be their duty to develop their own scientific replacements. This does them no honor. This is not to the benefit of our science or our academy. As of today, the work with scientific youth is one of the most important, most critical tasks confronting the academy. This is an absolutely mandatory condition for the successful development of

science, and a guarantee against the arising in science of such diseases as stagnation and conservatism.

Incidentally, new opportunities for working with young people are opened up by the restructuring of our country's higher school system, which currently is entering its practical phase. It is planned to involve the academy's scientists broadly in work at institutions of higher learning under conditions of occupying two jobs simultaneously, and to remove all the various far-fetched instruction guides and prescriptions that stand on this path. This will open up a new field for scientific cooperation and mutually beneficial contacts between the young people at the institutions of higher learning and the major scientists.

Soviet scientists and the Academy of Sciences do not restrict themselves to simply the scientific problems, but also carry out active social activity both within the country and beyond its borders. Our country's prominent scientists, together with scientists from other countries, are participating actively in the movement of fighters for peace.

As you know, the 27th CPSU Congress advanced a program of creating an all-encompassing system of international security, an inseparable part of which is the prevention of the arms race in space and the cessation of the arms race on earth, and nuclear disarmament.

For these purposes the Soviet side demonstrated an initiative for conducting a meeting between M.S. Gorbachev and R. Reagan in Reykjavik. In the course of the meeting an acute political struggle ensued.

As a result of the constructive recommendations of the Soviet Union, mankind has never been so close to agreements concerning the elimination of nuclear weapons. But the enactment of those agreements has been disrupted by the American leaders.

The negotiations in Reykjavik have shown even more clearly "who is who:" who is in favor of genuine disarmament, and who is in favor of the creation of new types of mass destruction weapons. It was made abundantly clear that the Washington administration is attempting to achieve military supremacy over the USSR.

Fearing censure by the nations on the planet, the U.S. Administration is currently attempting to heap the blame for the failure at the Reykjavik negotiations on the Soviet side, and to ascribe to itself our recommendations for the elimination of nuclear weapons. In this process the cynicism and demagoguery reach unprecedented scope. The American politicians are attempting to represent the so-called SDI, or "Star Wars," as a freedom shield, as a means of defense. And yet the SDI is an outlet to a new type of weapon. SDI is tremendously profitable for the capitalists.

Today, after Reykjavik, one observes in the world the intensification of the process of polarization, of demarcation between the political forces with regard to questions of war and peace. It is more important than it has ever been before to mobilize the nations on the planet in the struggle for lasting

peace. Soviet scientists will do everything necessary to assure that, together with their foreign colleagues, they will increase the intensity of the struggle for a nonnuclear world. One cannot doubt that Soviet science, by the efforts of our scientists and scientific collectives, will do everything necessary for the further reinforcement of our country's defense.

In conclusion I would like to state the following: the USSR Academy of Sciences is entering a new stage in its development. This has been dictated by the decisions of the 27th CPSU Congress, by the objective course of our country's socioeconomic progress, and by the requirements of the acceleration strategy. Our academy is surrounded by the concern shown by the party and the government, and by the nation's attention and respect. It has at its disposal creatively talented, highly qualified cadres who are devoted to socialism, as well as large material and technical resources and a tremendous amount of experience in scientific research. It is important, without waiting for additional decisions, to make the maximum use of that potential and to place it entirely at the service of restructuring.

In his day K. Marx said that science can fulfill its true role only in the republic of labor. That means that it is precisely in our socialist society that one can see revealed in full volume, in full force, the intellectual capabilities of man in his awareness of nature, in the transformation of social practice. It is a matter of assuring that the created objective prerequisites are supplemented by the dynamic, creative labor of Soviet scientists. Please allow me to wish you new successes in this matter.

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#### Statements of Assembly Participants

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 87 pp 17-19

[Article under the rubric "The Session of the General Assembly of the USSR Academy of Sciences": "Statements of the Assembly Participants on the Question of the Election of the President of the USSR Academy of Sciences"]

[Text] As president of the Ukrainian SSR Academy of Sciences, Academician B.Ye. Paton emphasized that scientists of the republic Academy of Sciences constantly sensed the attention, concern, and assistance of Anatoliy Petrovich Aleksandrov and the Presidium of the USSR Academy of Sciences. A.P. Aleksandrov repeatedly visited the Ukraine, taking an interest in all the work of the Ukrainian SSR Academy of Sciences, the development of new basic directions, and the organization of the relations of science with production. Having heartily thanked A.P. Aleksandrov for his immense labor, B.Ye. Paton wished him good health and great success in his work and in the activity of the fine scientific institution headed by him--the Institute of Atomic Energy imeni I.V. Kurchatov.

We have to elect, B.Ye. Paton said further, a new president of the Academy of Sciences at a critical moment, during the period of the acceleration of the entire socioeconomic development of Soviet society. The nomination of Guriy Ivanovich Marchuk for this position is entirely correct. Many of the members

of the Academy of Sciences have had an opportunity to work together with him and to observe his activity in various positions and in different situations. Guriy Ivanovich is a genuine scientist, who loves and respects science and is noted for a creative, lively approach to any problem and an exceptionally broad range of interests. Now, when the task of the mathematization of all fields of science and technology has become extremely urgent, the experience and knowledge of Guriy Ivanovich are especially necessary. And it seems that precisely mathematization, in the broad sense of this word, should now become one of the main, priority directions in the work of the academy.

G.I. Marchuk is a worthy student and successor of the unforgettable M.A. Lavrentyev. Just like Mikhail Alekseyevich, he has always willingly supported workers and been able to listen to others (and this is also very important, and this quality is given to far from everyone). Guriy Ivanovich is actively working with young people and in so doing generously shares his ideas with them. He is a lively, sociable, mobile person, which once again is very important.

It is necessary to emphasize that G.I. Marchuk, who for 7 years held the position of chairman of the USSR State Committee for Science and Technology, thoroughly familiarized himself with the situation in the national economy and with the level of development of technology not only in the USSR, but also in the fraternal socialist countries. This is also enabling him to work successfully in the area of the integration of science of the socialist countries and to strive for the accomplishment of the tasks which are posed for us in the Comprehensive Program of Scientific and Technical Progress of the CEMA Member Countries to 2000. The program was adopted in December 1985. The organizational period in its implementation is still far from over, and the tireless energy and knowledge of Guriy Ivanovich are all the more necessary here.

It is also important that G.I. Marchuk was at the source of the establishment of interbranch scientific technical complexes, and this at present is one of the main fields of activity of the Academy of Sciences. Here Guriy Ivanovich always placed and is placing above all the interests of basic science.

We are deeply grateful to Anatoliy Petrovich Aleksandrov for the immense work which he performed as president, Academician A.M. Prokhorov said. It was possible to learn much by observing how he works and works creatively and tirelessly. For the election of the new president of the Presidium of the USSR Academy of Sciences, the party group of the academy and the comrades, who spoke today, unanimously proposed one candidate--Guriy Ivanovich Marchuk. A.M. Prokhorov supported this proposal.

G.I. Marchuk is a genuine scientist, his works are well known both in our country and abroad, where he has great prestige. Undoubtedly, such a person is also necessary for the position of president.

While being deputy chairman of the Council of Ministers and chairman of the State Committee for Science and Technology, Guriy Ivanovich has not lost enthusiasm for scientific work and is actively continuing it, which in such a position is far from easy. It is very important that he understands and

supports the leading role of basic science, since the most advanced technology is based on the results of basic research. At the same time he knows well what is necessary for industry, and this is no less important. Of course, only on the basis of basic research is it possible to offer industry new developments, which provide the vigorous acceleration of scientific and technical progress. However, it is well known that the Academy of Sciences is confronted with many difficulties precisely during the introduction of the obtained results in industry. G.I. Marchuk, undoubtedly, will also be able to aid this matter.

It is possible to say even more that is positive in support of the candidacy of Academician G.I. Marchuk. But, apparently, everything said here is already quite sufficient to elect him to the position of president of the USSR Academy of Sciences.

First of all I want to express amazement at and even to some degree envy of Anatoliy Petrovich, who for 11 years in such a difficult position maintained his energy, vigor, and sense of humor, Academician A.A. Dorodnitsyn said. He further noted that he has known Guriy Ivanovich Marchuk for almost 40 years. After graduating from Leningrad University, he moved to Moscow and studied the problem of weather forecasting. He did not have a specialized education in meteorology, but a short time passed, and Guriy Ivanovich proposed a method of solving the forecasting problems of dynamic meteorology, which is very effective and was immediately put into experimental use. It is well known that the problems of meteorology are among the most difficult in mathematical physics.

Subsequently, G.I. Marchuk dealt with designs of atomic reactors. And as soon as the Siberian Department of the Academy of Sciences was formed, he headed its computer center, having started literally from scratch: neither people nor computers were yet available. Now the Computer Center of the Siberian Department is one of the leading scientific centers in information science in the system of the Academy of Sciences.

In Novosibirsk Guriy Ivanovich established a school of dynamic meteorology and organized work on the accomplishment of quite broad problematic tasks, including the analysis of the circulation of the ocean and the state of the environment. Then works on the study of biological processes, first of all on the problems of immunity, appeared entirely unexpectedly for those who knew him. Now this latter work is well known not only in the USSR, but also throughout the world. Very interesting qualitative results, which in many respects are surprising for medicine, were obtained here.

A few words about the style of work of G.I. Marchuk. One often has occasion to be faced with the following situation: a scientist has selected for himself some method and, having received a new problem, immediately sets to work on it, but if the solution becomes difficult, he begins to fit the problem itself to this method. One frequently has to combat this. Guriy Ivanovich always proceeds from the problem, selects the method most equal to it, and if it does not exist, develops and invents it and ends without fail with a specific result.



I also want to note another thing. It is often possible to see that a person, who has just been appointed to a lofty managerial position, immediately becomes the "best specialist" in all problems. Everyone has been able to observe G.I. Marchuk in a managerial position for quite a long time, and it is safe to say: such a thing would not happen with him. And with great pleasure I support the proposal on the election of Guriy Ivanovich Marchuk as president of the USSR Academy of Sciences, A.A. Dorodnitsyn said in conclusion.

Academician V.A. Koptuyug emphasized that the very great prestige of A.P. Aleksandrov as a scientist and as an organizer of science played a very large role both in the activity of the Academy of Sciences itself and in the integration of the efforts of academic institutes and industry. On behalf of the members of the Siberian Department of the USSR Academy of Sciences V.A. Koptuyug expressed profound gratitude to A.P. Aleksandrov for the support of the development of academic science in Siberia and wished him health and success in the matter to which he has decided to devote his efforts.

V.A. Koptuyug characterized Guriy Ivanovich Marchuk as a prominent organizer of science, which he became during the 18 years of work at the Siberian Department. G.I. Marchuk made an enormous contribution to the formation of the present structure of the USSR Academy of Sciences and the network of its affiliates and scientific centers. Here it is necessary to note the strategic principle, which is being consistently implemented by him, of the constant and close contact of executives of academic science with soviet and party organs. This is one of the most important aspects of the experience of the development of science in the country, to which people will also undoubtedly turn in other regional subdivisions of the USSR Academy of Sciences.

G.I. Marchuk made an enormous contribution to the integration of academic, sectorial, and VUZ science, to the formulation of long-range comprehensive programs of scientific research and development, and to the organization of the introduction of scientific achievements in industry.

The services of Guriy Ivanovich in the establishment of the Computer Center of the Siberian Department of the USSR Academy of Sciences and the Main Production Computer Center in Novosibirsk are great. He is also the organizer of the computer centers in Irkutsk and Krasnoyarsk. He developed the principles of the formation of computer networks and the use and operation of computer hardware.

But his active, vigorous propaganda and practical activity in the area of the mathematization and computerization of science are even more important. Owing to this computer hardware and mathematical methods at the Siberian Department of the USSR Academy of Sciences have penetrated practically all fields of science: biology, economics, and chemistry, as well as are being introduced in the educational process. Based on my own experience, V.A. Koptuyug said, I am sure that the majority of members of the Siberian Department have experienced the effect of this propaganda, and as a result our institutes of the most different type have taken in this area a good position in the country.

It is impossible once again not to note the most important circumstance: the clear understanding by Guriy Ivanovich of the tasks and role of basic science. As chairman of the Siberian Department he supported very actively the most important directions of basic research, which had already formed or were forming. Here it is possible to cite a large number of specific examples. And, of course, it is necessary to emphasize that in the past 7 years, while working in the very responsible position of chairman of the USSR State Committee for Science and Technology, Guriy Ivanovich acquired experience in the organization and coordination of scientific research already on the scale of the country and even more broadly--to a certain degree on the scale of the socialist community.

At the USSR Academy of Sciences there are many outstanding scientists. Undoubtedly, other worthy candidates for the position of president could also have been nominated. But if we weigh the entire set of factors, which it is necessary to take into account at the present, extremely crucial stage of the life of our country, and the tasks, which today face the Academy of Sciences of the Soviet Union, one has to admit that the candidacy of Guriy Ivanovich Marchuk in this situation is the best.

Academician Ye.I. Chazov expressed confidence that each of the people seated in the hall perceived with a sense of regret the resignation of Anatoliy Petrovich Aleksandrov from the position of president. The broad scientific erudition of Anatoliy Petrovich is well known to everyone, many also know his great humanity and concern for people. I want to wish him good health and creative longevity.

The election of a new president of the USSR Academy of Sciences is not a formal act. This choice in many respects determines the development of the Academy of Sciences for a specific period and the scientific life of our country.

The words of Academician I.M. Gubkin about Aleksandr Petrovich Karpinskiy, the first president of the USSR Academy of Sciences, come to mind: The pronoun "I" did not exist in his statements and speeches. He said, the academy is not "I," the academy is "we." And in discussing the candidacy of Guriy Ivanovich Marchuk, it is necessary to emphasize that this is the candidacy of a scientist and man, who defends the principle of collectivism in science.

Here people have already spoken about the fact that basic science is the basis of technical progress, the basis of the development of the entire national economy of the country. Unfortunately, even in academic circles and within the walls of the academy they have forgotten at times that it was established first of all for the development of basic research. Academician G.I. Marchuk, as a representative of basic science, understands this perfectly. At the same time, having worked for 7 years in the position of chairman of the State Committee for Science and Technology, he also remembers that fundamentalism is necessary not only in itself, but also for the sake of new practical achievements.

Even medical people have had occasion to acquaint themselves with the works of G.I. Marchuk. His work at the meeting point of two basic sciences--

mathematics and immunology--was published in one of the medical journals. This work is capable of aiding medical people substantially in the solution of their problems.

At present the organization of scientific research is acquiring greater and greater importance. Scientists give ideas, but the organizers of science are of no less importance. They determine in many respects the success of the entire academy and its scientific research. In this respect Guriy Ivanovich, who combines in one person a scientist and an organizer, is a very good candidate.

And there is another thing. There exists such an expression--"the test of the place." Wherever Guriy Ivanovich worked, he always maintained responsiveness, honesty, and frankness. This is a thing of no little importance. I would like, having joined the preceding speakers, to support the candidacy of Guriy Ivanovich Marchuk for the position of president of the USSR Academy of Sciences.

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#### Marchuk Speech

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 20-21

[Speech by Academician G.I. Marchuk at the session of the General Assembly of the USSR Academy of Sciences on 16 October 1986 under the rubric "The Session of the General Assembly of the USSR Academy of Sciences": "The Speech of Academician G.I. Marchuk"]

[Text] First of all I want to express profound gratitude to the General Assembly for the great confidence which it has put in me, having elected me president of the USSR Academy of Sciences.

This position, as A.P. Aleksandrov correctly noted here, is very difficult. I will say frankly: the more good words said in my address, the more strongly I sensed with each new statement the responsibility which now rests on my shoulders. And, of course, the president of the Academy of Sciences can successfully carry out his functions and duties to the Academy of Sciences, to the party and to the country, if he works in the closest cooperation with his immediate colleagues--the vice presidents, the chief scientific secretary, the members of the Presidium, the bureaus of the departments, the executives of the institutions of the Academy of Sciences, and the entire collective as a whole. Therefore, of course, the wishes, which were voiced here, apply to all of us.

I want to thank for great confidence the Politburo of the party Central Committee, which recommended to the General Assembly of the USSR Academy of Sciences to elect me president. I was deeply moved by the speech of Member of the Politburo of the CPSU Central Committee and Secretary of the CPSU Central Committee Ye.K. Ligachev, who covered the problems, which the academy should solve, and supported my candidacy. It seems to me that all the questions,

which have now been posed to the Academy of Sciences, are the theme of what we should do. The 27th party congress clearly specified this.

I believe that the primary thing is the increase of the role of basic research at the Academy of Sciences. Thus far the Academy of Sciences, guided by the logic of the development of basic research and bearing responsibility for it, of course, devoted all its efforts and attention to precisely this direction of science. By the very development of science the academy ensured scientific priority in all spheres of social and technical progress, while also dealing simultaneously to a significant degree with applied problems.

Now, when the 27th party congress has proclaimed the changeover to an intensive economy, when new methods of management, which are based on the principles of full cost accounting and self-supporting production [samookupayemost], are becoming a reality, the responsibility of sectorial science for the results of the introduction of basic ideas and new technologies is increasing sharply. Precisely at this moment the Academy of Sciences needs to specify clearly how to proceed.

M.S. Gorbachev in the Policy Report of the CPSU Central Committee to the 27th CPSU Congress emphasized the dominant role of the Academy of Sciences in the development of basic research. Well-organized basic research initiates new discoveries and the development of new technologies and new materials, that is, all the components which in the end govern scientific and technical progress and its realization in all the sectors of the national economy.

In this process of development economic science is beginning to acquire greater and greater importance, about which Ye.K. Ligachev spoke here. The development of economic sciences is now especially important, because levers and mechanisms, which will make it possible to do this, are necessary for the changeover to an intensive economy. I believe that in their development the role of economists of the Academy of Sciences will continuously increase, and we should promote this in every way.

At present the human factor is acquiring enormous importance. Man should be at the focal point of the development of science, equipment, technology, and social, political, and ideological problems. In this connection, I believe, the Academy of Sciences should devote very much attention to the social sciences. Our society cannot be developed now without their new achievements. Profound theories, which harmoniously complement each other, should give guidelines for economic and social policy and serve as its reliable foundation.

I will note that the Academy of Sciences has many difficult and unsolved organizational problems. Comrade Ligachev also spoke about this in his speech. Among such problems are: the increase of the flexibility of the work of our scientific research institutes, the increase of the supply with equipment, computer hardware, and reagents of the institutes which have natural science research themes. And I especially want to emphasize the need for the increase of the role of the departments of the USSR Academy of Sciences. The main responsibility for the development of scientific research

in their directions will actually be assigned to them, sufficient independence and resources will be made available to them.

A fairly large number of problems, which are connected with the new forms of the organization of science, such as interbranch scientific technical complexes and temporary scientific production collectives and laboratories, which, by taking part in basic research at the early stages, will help the sectors of the national economy to become aware of and use the innovations which are continuously emerging, are arising. In short, there are many problems.

I also want to emphasize that the Academy of Sciences has remarkable prestige in the world, but the spirit of the times is such that we should work more and more intensively.

In conclusion, dear comrades, friends, and colleagues, I sincerely thank you for the great confidence, which you have already put in me, and hope that subsequently you will give support to me and the Presidium of the Academy of Sciences as the main management organ of the academy and we will proceed together along the path outlined by the decisions of the 27th party congress.

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#### Marchuk Biography

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 22-23

[Article: "President of the USSR Academy of Sciences Guriy Ivanovich Marchuk"]

[Text] Academician G.I. Marchuk was born on 8 June 1925. He is a distinguished scientist in the field of computational mathematics, atmospheric physics, geophysics, and nuclear reactor physics and a prominent organizer of science, whose works have received extensive recognition in our country and among the world scientific community.

Important results in the theory of radiation transfer, atmospheric and ocean hydrothermodynamics, and mathematical simulation in ecology belong to him. The methods of designing nuclear reactors, which were proposed by him in the 1950's, at present also constitute the basis of simulation analyses in this field. He is one of the founders of a new, topical direction in applied mathematics--mathematical simulation in immunology and medicine.

The works of G.I. Marchuk in the field of computational mathematics have received great popularity. He made a substantial contribution to the theory of adjoint equations and conducted studies of various methods of solving problems in mathematical physics and algebra. The methods of statistical simulation as applied to complex problems of atmospheric optics, which were developed by him and his students, became the basic design methods in this area. A number of important jobs in the area of computer software and automated systems of control and data display were performed under his supervision and with his immediate participation.

G.I. Marchuk displayed fully the outstanding talent of a scientist and organizer of science while working at the Siberian Department of the USSR Academy of Sciences. Working for 15 years as director of the Computer Center of the Siberian Department, he established a prominent scientific school in computational and applied mathematics. The collective of the Computer Center, which he headed, in a short time became one of the recognized leaders in our country and abroad in a number of important applied directions.

In the position of chairman of the Siberian Department of the USSR Academy of Sciences G.I. Marchuk was able to launch the formulation of extensive programs, which were aimed at the further intensification of basic and applied research at the Siberian Department. The large-scale Sibir Comprehensive Program, which is aimed at the rapid development of the economy of this most important region of the country, was devised on his initiative.

While holding the position of chairman of the USSR State Committee for Science and Technology, G.I. Marchuk exerted much effort for the formation of a set of state comprehensive goal programs in the most important directions of science and technology. Under his supervision much work was done on increasing the efficiency of scientific and technical cooperation with the CEMA member countries.

The scientific services of G.I. Marchuk were commended in 1962 by his election as a corresponding member and in 1968 as a full member of the USSR Academy of Sciences. From 1975 to 1980 he was in charge of the Siberian Department of the USSR Academy of Sciences and was vice president of the USSR Academy of Sciences.

G.I. Marchuk is successfully combining fruitful research activity with much scientific organizational, public, and state work. At the 25th CPSU Congress he was elected a candidate member of the CPSU Central Committee and at the 26th and 27th congresses was elected a member of the CPSU Central Committee. He is a deputy of the USSR Supreme Soviet.

The lofty title of Hero of Socialist Labor has been conferred on G.I. Marchuk, he has been awarded four Orders of Lenin and other state decorations, the Lenin and USSR State Prizes have been awarded to him.

G.I. Marchuk has been elected a foreign member of the academies of sciences of the People's Republic of Bulgaria, the German Democratic Republic, the Czechoslovak Socialist Republic, and Finland and an honorary doctor of a number of foreign universities.

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## Kotelnikov Speech

MOSCOW VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 24-33

[Speech by Vice President of the USSR Academy of Sciences Academician V.A. Kotelnikov at the session of the General Assembly of the USSR Academy of Sciences on 16 October 1986 under the rubric "The Session of the General Assembly of the USSR Academy of Sciences": "On the Progress of the Fulfillment by the USSR Academy of Sciences of the Decisions of the 27th CPSU Congress and the Implementation of the Decree of the General Assembly of the USSR Academy of Sciences of 20 March 1986"]

[Text] Now, following the 27th congress of our party, the entire country is engaged in the search for means of working in the new way, the changeover of life to a more intensive means of development, the elimination of various losses, of which we still have very many, and the putting to use of the available large reserves.

At the General Assembly in March of this year we discussed the problems which in this connection face the Academy of Sciences. Much that is useful was expressed, a rather good decision was adopted. However, of course, no one thinks that reorganization ends at this. As is known, reorganization in the country is proceeding not very quickly, although everyone, at least in words, is for it. Many are waiting for instructions and are displaying indecision. Here reorganization is also still far from finished. It is possible and necessary to do much more so that our work would be more efficient and more productive. Great and very difficult tasks face us.

Reorganization in our country should take place on the basis of scientific and technical progress, which is based on the development of basic science and the use of its results in the national economy. So that reorganization would be successful and so that our country, by using the advantages of the socialist system, would have a higher pace of development than the capitalist countries, it is necessary that our science and technology would also be developed quite rapidly. The administration of a number of capitalist countries understands this and is trying to complicate the progress of our science in the main directions. This pertains to the sciences, which are connected with the development of computer technology, to the most advanced sections of radioelectronics and biology, particularly genetic engineering, to the sciences, which are connected with the development of new materials, and to instrument making for scientific research. It is not that easy to compete with the science of the capitalist developed countries: only 25 percent of the total number of scientists in the world are concentrated in our country (with the other socialist countries, 30 percent). Under these conditions we can win the competition only owing to very good work and the concentration of efforts in the decisive directions, by using all the advantages of the socialist system and borrowing everything useful for us in other countries.

The leadership of our country now understands well the significance of basic science and is doing much for its development. I will cite a number of

indicators from the plans of development of the Academy of Sciences for the 12th Five-Year Plan, which impose very great responsibility on us.

Thus, the capital investments in science for the USSR Academy of Sciences during the 12th Five-Year Plan are increasing by 1.7-fold as compared with the 11th Five-Year Plan and will come to approximately 1.5 billion rubles, leading the average increase of capital investments for the country, which should come to 24 percent. The weak experimental production and instrument making base (in contrast, for example, to the Ukrainian SSR Academy of Sciences) was a great shortcoming of our academy, which, undoubtedly, decreased the practical effectiveness of our research. I can report that 2.5-fold more capital investments for the development of this base are planned for the 12th Five-Year Plan than for the 11th Five-Year Plan. They will come to 15 percent of the total capital investments in science, while during the 11th Five-Year Plan they amounted to only 10.4 percent and during the 10th Five-Year Plan--4.1 percent. The accomplishment of the outlined growth rate will require great efforts from the Presidium of the Academy of Sciences, our construction subdivisions, and client institutes.

The availability of good instruments is necessary for the development of science. Unfortunately, as is known, our instrument making industry is now unable to satisfy science. The importing of instruments is being complicated due to difficulties with currency and the ban on the sale to us of a number of most advanced instruments in the capitalist countries. The Academy of Sciences has been posing for a long time the question of the need to expand the development and production of instruments for scientific research in our country, as well as in other socialist countries. Much has already been done in this area. Now at the enterprises of the Academy of Sciences such instruments worth approximately 40 million rubles are being produced a year. Their output has been increased both at the republic academies of sciences and in industry, the quality of the instruments being produced is increasing, but this is still insufficient.

During the 12th Five-Year Plan it is envisaged to take a very large step forward in this area. Thus, at the Academy of Sciences alone it is planned to establish a number of design bureaus and plants with an area of more than 200,000 square meters and to increase the output of instruments in 1990 to 100 million rubles a year. The Scientific and Technical Association of the Academy of Sciences and the Pribor Interbranch Scientific Technical Complex, which has now been organized at the academy, will perform the planned, I would say, immense work on the expansion of our instrument making base. I want to wish them success.

Of course, instrument making will be developed rapidly during the 12th Five-Year Plan not only at the USSR Academy of Sciences. The task of developing and producing unique instruments, which are intended mainly for basic research and will be produced, at least initially, in small series, is being assigned to us.

The current expenditures on scientific research work in the country, unfortunately, are not recorded in the five-year plan. They are also not planned by the State Planning Committee for the Academy of Sciences. This



does not make it possible to draw up a long-range plan of development. The academy has many times posed this question, but so far it has still not been settled. The allocations for science are planned only by years and are changed subject to the possibilities of the budget. In the plan for 1987 the total allocations to the Academy of Sciences with respect to the budget will be increased by 8.8 percent as compared with 1986. These figures show what attention is being devoted to the development of basic science--the increase of the allocations for it lead the increase of the national income of the country, which in accordance with the five-year plan will be equal on the average to 4 percent a year, and the increase of the total expenditures on science, which will come on the average to 6 percent a year.

We do not have a long-range plan of the development of academic science, which has been approved by directive organs. We have drawn up only five-year plans, which have been approved only with respect to capital construction. It is obvious that it is necessary to have such a plan for several 5-year periods ahead, as is now being done with respect to a number of questions. We need to devote serious attention to the preparation of this document, having foreseen in it the base of the development of science not only in the center, but also throughout the country, especially in the RSFSR.

Now, after the trip of M.S. Gorbachev to the Far East, where he familiarized himself very thoroughly with the work of the Far Eastern Center of the USSR Academy of Sciences, a long-range plan of the development of Far Eastern science, which should be approved by directive organs of the country, has been drawn up. In November of this year the Presidium of the USSR Academy of Sciences is planning to hold a field session in Vladivostok.

The interdepartmental scientific technical complexes, which have been established in our country, will be of great importance for the increase of the effectiveness of science, including basic science. Both scientific research organizations and industrial enterprises belong to the complexes and are taking part in their work. Their task is to ensure the rapid development of new technology in the most important directions of scientific and technical progress and to bring it up to extensive introduction with the assistance of ministries. These complexes are now going through the stage of organization; five-year and annual plans have been drawn up, the questions of the strengthening of the material base of the complexes and the interaction between their organizations are being examined. It is especially important to carry out properly interaction with organizations, which do not belong to, but are taking part in the complex, since they, on the one hand, remain subordinate to their ministries and, on the other, are subordinate to the general director of the complex. Two meetings of our Presidium were devoted to questions of the work of the complexes.

The Presidium of the USSR Academy of Sciences has taken steps on the strengthening of the influence of the basic sciences on the development of the country and on the quickest development of those of them, which can have a decisive influence on the progress of the national economy.

In particular, the Problems of Machine Building, Mechanics, and Control Processes Department of the USSR Academy of Sciences was organized for the

purpose of concentrating efforts on the comprehensive solution of urgent problems.

Jointly with the Bureau of the USSR Council of Ministers for Machine Building a plan of scientific research work of the USSR Academy of Sciences on the fundamental problems of machine building was drafted and approved in the interests of machine building ministries.

In the past decade the scientific potential of the academies of sciences of the union republics has grown significantly stronger and increased. The USSR Academy of Sciences aided as much as it could the development of academic science in all the union republics. Close and diverse relations exist between our and the republic academies of sciences. However, very few basic themes are still being elaborated jointly with scientists of the different academies. The coordination of their activity exists, but cooperation has not been properly organized. It is necessary in the immediate future to eliminate this shortcoming, in order to achieve the concentration of forces in the most important directions of science.

The closer and constant interaction of our academy with the USSR Academy of Medical Sciences and the All-Union Academy of Agricultural Sciences imeni V.I. Lenin is also necessary.

Coordinated close joint work is of very great importance for the development of science in the socialist camp. Our Academy of Sciences is cooperating quite extensively with the academies of sciences and other organizations of the socialist countries. However, due to bureaucratic, organizational, financial, and other restrictions this cooperation has not taken place very intensively. At the meeting of the Council for Mutual Economic Assistance the decision has now been made to establish more intense and specific relations between the countries, having chosen for this the following most urgent directions:

--the electronization of the national economy--supervision has been assigned to Deputy Chairman of the USSR Council of Ministers Yu.D. Maslyukov, scientific supervision has been assigned to Academician Ye.P. Velikhov;

--integrated automation--supervision has been assigned to Deputy Chairman of the USSR Council of Ministers I.S. Silayev, scientific supervision has been assigned to Academician K.V. Frolov;

--atomic energy--the supervisor is I.S. Silayev, the scientific supervisors are Academicians A.P. Aleksandrov and V.A. Legasov;

--new materials and the technology of their production--supervision has been entrusted to Deputy Chairman of the USSR Council of Ministers V.K. Gusev, scientific supervision has been entrusted to Academician B.Ye. Paton;

--biotechnology--the supervisor is Deputy Chairman of the USSR Council of Ministers V.S. Murakhovskiy, the scientific supervisor is Academician Yu.A. Ovchinnikov.

The corresponding programs have already been formulated with the participation of the socialist countries and in the majority of cases have been approved. It is proposed to perform the work not only in accordance with treaties, but also in accordance with contracts, in which the mutual, including financial, obligations will be formulated. Very complex and difficult work lies ahead of us, but it is necessary in order to overcome the shortcomings of our scientific relations with the socialist countries. For the successful progress of the work specific rights, which facilitate contact with organizations of other countries, have been granted to its participants.

The CPSU Central Committee and the USSR Council of Ministers are keeping this work under control. In September the Presidium of the Council of Ministers examined it and adopted a decision which is aimed at its financing.

At the 1986 annual General Assembly of the Academy of Sciences many suggestions were voiced and a decision was adopted. It seems that it is necessary to report back on what has been done in this time. In the decision, in addition to general instructions, which scientific institutions should take into account in their work and in conformity with which they will report back, the Presidium of the Academy of Sciences was charged with the following.

First, to make adjustments in the Basic Directions of the Development of Science for 1986-1990 and the Period to 2000 and in the five-year plans; this assignment was fulfilled in good time.

Second, to elaborate during 1986 specific measures on the strengthening of the material base of the Academy of Sciences. I have already spoken about the state of affairs in this direction.

Third, the Presidium was ordered to examine the question of the attraction of young researchers to the Academy of Sciences. This question proved to be difficult, we are continuing to work on it. I will return to it again.

Fourth, it was charged to stimulate the activity of the scientific councils. This work is now being performed.

The General Assembly also commissioned the Presidium to improve radically the scientific organizational and economic activity of its subdivisions. The Presidium established a competent commission under the chairmanship of Academician V.N. Kudryavtsev, which should have formulated steps on the improvement of the work of the staff of the Presidium. The questions proved to be very difficult--the commission completed its work, but was unable to provide specific proposals on reorganization. The Presidium will have to take the necessary steps for the completion of this work.

It was also commissioned to consider the question of improving the quality of scientific and scientific and technical propaganda. The Council of the Academy of Sciences and the State Committee for Science and Technology on Information jointly with the Society for Knowledge is now dealing with this question.

Moreover, the Presidium was charged to examine the proposals, which were submitted at the General Assembly, to take steps on their implementation, and to report on the performed work at the next session of the General Assembly. Corresponding Member of the USSR Academy of Sciences A.S. Khokhlov will speak on this question.

The Presidium of the USSR Academy of Sciences monitored the progress of the fulfillment of the decision of the General Assembly and in August issued a special order on this question. Such is the situation with the implementation of the decisions of our annual General Assembly, but it is impossible to consider that we have envisaged everything at this assembly. The changeover to a more dynamic means of development is not a short-term campaign. It should, obviously, be continued without interruption. After the March General Assembly assemblies were held in the collectives, where the questions of reorganization were discussed, there were many debates in the press, and the very meaningful statements of M.S. Gorbachev were published. It was a time to think out measures, which contribute to the intensification of progress and should be implemented at our academy. Therefore, at this assembly we should not so much summarize what has already been done as continue the discussion of the questions of reorganization, having devoted particular attention to reorganization at the academy itself.

The USSR Academy of Sciences has done very much for the development of our country, the achievements of our scientists are widely known, and there is no need to speak about them in this auditorium. However, we are all certain that it is possible to work better and more efficiently and to use more purposefully the manpower and material resources which are at our disposal. We have already said much about this, but so far have succeeded in doing little. Now, when the country is entering new intensive paths of development and is discarding obsolete statutes and obstacles, we also need to take steps on the creation of conditions which ensure the rapid progress of our science. In this connection I want to dwell on several questions which it is necessary to discuss (in the statements, obviously, other suggestions will also be advanced).

First, this is the question of scientific personnel. At our general assemblies there have been many statements concerning the fact that the wage of scientists does not stimulate intensive work, that there is no opportunity to actively select the personnel, who work most productively, and to get rid of unpromising personnel. With the introduction of the new statute on the wage and the carrying out of certification this opportunity appeared. Now at the Academy of Sciences the changeover to the new system has been completed at more than 80 percent of the subdivisions, and it seems useful to report on its results.

Of the 191 institutions, which in conformity with the decree of the Presidium of the USSR Academy of Sciences should have completed the changeover to the new system by 1 October of this year, only 20 had not changed over. Of the people liable to certification, 2 percent were dismissed either on the basis of unsatisfactory certification (0.6 percent) or at their own request in anticipation of a negative certification, as well as for other reasons. The salaries of 3.2 percent of the people who underwent certification were reduced

and those of 31.1 percent were increased. The majority of scientific institutions set aside a fund for the establishment of additional wage increments. On the average this fund comes to 1.3 percent of the wage fund. But at individual institutes it ranges from 6.7 percent (the Institute of the International Workers' Movement) to 0.2 percent (the Institute of Plant Physiology).

During the changeover to the new system the themes of work were also revised. In all 267 themes were eliminated from the plans. A number of subdivisions were abolished, for example, 44 structural subdivisions were done away with at the Physics Institute of the USSR Academy of Sciences.

Thus, it is possible to regard as satisfactory the overall picture of the changeover to the new system of the remuneration of labor at the Academy of Sciences. However, if we examine the situation at individual institutes, we will see great diversity. Thus, individual institutes took the path of the least difficulties and freed the minimum wage fund, having allocated it for a slight increase of the salaries of a small number of staff members, which does not ensure the stimulating influence of the new system of the remuneration of labor. Thus, they did not use fully the possibilities of the new system for the intensification of work, several acted so as not to greatly offend anyone. Obviously, during subsequent certifications it will be necessary to eliminate this shortcoming and to act more in accordance with principle, being concerned not only about the welfare of individual people, but also about the fulfillment of the great, responsible, and difficult task which faces science.

The question of the aging of the scientific personnel of the Academy of Sciences is very serious. It has repeatedly aroused our anxiety. I will cite several figures.

Number of Scientists Under the Age of 40  
of Different Skills at Scientific Institutions of  
the USSR Academy of Sciences, percent

	1973	1983
Doctors of sciences.....	10.7	3.0
Candidates of sciences.....	52.4	35.2
All scientists.....	61.6	45.9

Number of Scientists Over the Age of 60 at Institutions of  
the USSR Academy of Sciences, percent

	1973	1983
Doctors of sciences.....	31.7	25.5
Candidates of sciences.....	3.5	3.4
All scientists.....	5.7	5.3

It is evident that the number of scientists under the age of 40 is decreasing, while the number of those over the age of 60 is not increasing. The 40-60 age bracket accounts for the bulk of scientific personnel. An analogous process

is also occurring at nonacademic scientific institutions of the country. Such an aging of scientific personnel hinders progress in science, it is becoming more conservative. Fewer young people are entering science, the selection of talented scientists is going worse. In the developed capitalist countries the aging of scientists is not occurring. There the age structure corresponds approximately to the structure which existed here and there in the 1960's and early 1970's.

Now, in contrast to the 1960's, the increase of the number in science in our country comes to 2-3 percent a year, as it is approximately throughout the world. A greater increase, obviously, is impossible, since already now for every eight people, who are employed in the production sphere, there is one person, who is employed in the sphere of science, while the able-bodied population in our country in the immediate future will hardly increase. In this situation the accumulation of personnel in the 40-60 age group does not make it possible to attract young people to science.

But what is the situation in the other developed countries? There the outflow of people from science to industry, business, and other fields occurs at the age of 30-40. What is to be done in order to successfully compete with foreign science? It seems that we also need to ensure an outflow from science at the age of 30-40. The change of the type of work at the age of 50-60, obviously, will occur with greater difficulties and with greater losses, since at such an age it is already difficult to change occupation. On the other hand, by the age of 30-40 a staff member has already been working in science for about 10 years, and during this time it will become clear where it is most advisable to use him--in science or another sector--industry, in teaching work.

Such an outflow can theoretically be accomplished by means of the certification, which has now been introduced, but it seems to me that without additional steps it will not be accomplished effectively. I now have only one suggestion on the accomplishment of this process, which should be discussed, namely: to establish for institutes a mandatory quota of the hiring of young people, say, several percent of the total number. Then, in order to have a place for the hiring of young people, it will be necessary to get rid of people of a more mature age through certification. Under the threat of not passing the certification many will probably leave at their own request. Of course, the dismissal of staff members is an unpleasant procedure, but I do not have other suggestions on how to ensure the necessary age composition at academic institutes.

As to the members of our academy, here the age statistics are as follows.

Number of Members of the Academy Under the Age of 50, percent

	1976	1986
Academicians.....	5.8	0.8
Corresponding members.....	17.8	7.3

# Number of Members of the Academy Over the Age of 75, percent

	1976	1986
Academicians.....	15.3	36.6
Corresponding members.....	8.1	13.7

Thus, the number of members of the academy under the age of 50 in our composition is decreasing drastically and we are aging greatly. What should one do? First of all, try to elect young people to the academy, which we have been trying to do for a long time, but this is not helping enough.

Let us turn to the experience of other academies. Steps for the support of the young stratum at the academies are envisaged in the charters of the academies of sciences of Hungary and the GDR. Here, as at all other academies, including ours, the members are elected for life, but at the Hungarian Academy of Sciences each time, when an academician or corresponding member reaches the age of 75, a new additional vacancy is opened in advance. The celebrator in this case remains, as before, a full member of the academy. Thus, the number of members of the academy under the age of 75 remains constant and does not depend on the accumulation of members over the age of 75.

In the GDR there is a similar rule, but 65 has been taken as the cut-off age, that is, at this academy the number of members of the academy under the age of 65 is fixed, and it does not depend on the accumulation of members in the older age group.

Perhaps, it is necessary to request that we also be permitted to establish such a procedure. This question is also of ethical importance. If the corresponding decision is adopted, the "long-lived" members of the academy will not have to reproach themselves with the fact that they are checking the influx of young people. Perhaps, it is also necessary to return to the suggestion that candidate corresponding members should be no more than 50 years old. At one time, when we hoped to combat the aging by other means, this suggestion was rejected by the General Assembly.

The question of academic graduate studies was examined at the past assembly. I completely agree with what was said and want to cite just a few figures. Of those who have completed basic graduate studies, 82 percent remain at a job at the Academy of Sciences. Thus, for the most part, we are training them for ourselves, and, obviously, it is necessary to do this that way, since this is most useful for the Academy of Sciences. As to special-purpose graduate studies (and here they include approximately half of the graduate students), all those completing them leave us: 40 percent go to higher educational institutions, 20 percent go to the academies of sciences of the republics. It seems that it is necessary to give those studying in special-purpose graduate studies a broader outlook, to which we must direct particular attention, since those who have completed these graduate studies have to deal not only with a narrow field which is connected with the dissertation.

Now about our five-year plans. It seems incorrect that in the plans for the 12th Five-Year Plan for many institutes all the themes come to an end only in 1990, that is, are of a 5-year duration. In the Physical, Technical, and Mathematical Sciences Section such institutes make up one-third, in the Chemical, Technological, and Biological Sciences Section even more--two-thirds of all the institutes, in the Earth Sciences Section--half, while in the Social Sciences Section--less than one-fifth. At the other institutes of these sections there are operations, which are being planned for a longer period, but there are many operations, which last 5 years. But at the Institute of Philosophy 40 percent of the themes are elaborated for more than 5 years, and the deadline of their completion goes beyond the five-year plan. Given such drawn out plans it is difficult to ensure intense work, which is now required of us. In the developed capitalist countries, as a rule, the work on a specific theme lasts for 2 to at most 3 years, which creates the conditions for intense work from the very start and ensures dynamism and the flexible changeover of themes to new directions. At our institutes from the start of the five-year plan all the assets are distributed in advance among themes for the entire five-year plan. And in order to begin work in a new direction, the institute needs additional assets. Often people come to me and say or write that abroad a new very urgent direction has been started, it has already united hundreds of scientists, while in our country it has united only a few people. Therefore, they ask for additional personnel and assets. But where is one to get them, if everything has already been distributed?

Such incorrect planning in our country, obviously, stems from the fact that the institutes fill the entire five-year plan with themes of today, since they do not know what new operations will be necessary in 3-4 years. This will be determined by the successes of our and world science and by the new tasks which life will pose.

It seems that it is necessary to envisage a shorter period for the work being performed at institutes, to make the plans more intense, and to envisage in them reserve means for new work which will be included in the plan during the five-year plan. Then the work will proceed more productively and more dynamically. Experience shows that now during the five-year plan institutes also need to take on new themes, and they are fulfilled at the expense of a concealed reserve of the five-year plan. Thus, during the 11th Five-Year Plan for the Physical, Technical, and Mathematical Sciences Section the number of new themes, which were not envisaged by the five-year plan, came to 37 percent of the initial plan, for the chemical and biological sciences--15 percent, for the earth sciences--12 percent, and for the humanities--61 percent.

In speaking about our plans, it is also necessary to note that they have far less dynamism than in the West and than is needed for the country at present, but for a different reason: so far effective steps, which stimulate the changeover to new themes, have not been devised in our country. It is much easier, of course, for scientists to work in a customary field, where they have experience and know all the literature and colleagues. In the West, when a 2- or 3-year theme is completed, the assets for new jobs have to be obtained from different funds and at different organizations. In this case competitions of ideas occur. Assets are made available for the most promising directions and to the most successful collectives. Under these conditions



scientists, although this is not always pleasant for them, have to change over to new themes. We also probably need to achieve the conducting of such competitions of ideas. It would be possible to organize this as follows. The institute proposes a number of themes, which it considers possible and advisable to include in the plan. The number of themes should exceed its possibilities. Then special commissions or bureaus of the departments, availing themselves of the expert opinion of councils, select from them the most urgent ones and allocate assets for them. Here the greatest attention should be devoted to the most important basic directions, as well as to the use of their results in practice. It will be difficult, obviously, to carry out the progressive selection of themes within the institute, without interference from outside, since the authors will defend their suggestions "to the last." The examination of themes should be carried out at the end of the 5-year periods, as well as at intermediate dates for the filling up of the envisaged reserve.

At the 27th CPSU Congress serious critical remarks were voiced about the state of the social sciences, their certain remoteness from the requirements of life was noted. In this connection the plans of research activity of scientific institutions were revised, steps on the consolidation of the Economics Department and its leading institutes were taken, and research on socioeconomic problems was stepped up. However, as was noted at a recently held conference of the executives of social sciences chairs, the reform of the work of our scientific institutions, especially of the Philosophy and Law Department, is proceeding extremely slowly, appreciable changes have not occurred here.

Many of the works of the Academy of Sciences are being used successfully in the national economy. The steps, which are now being implemented on the stimulation of scientific and technical progress and the establishment of interdepartmental scientific technical complexes and pilot experimental works at organizations of the Academy of Sciences, will improve this process. But all the same it is also necessary to continue further to improve the means of turning over the results of the basic sciences to the national economy. It seems that it would be useful upon the completion of any job to specify in documents what to do further with its results--to place the report in the archive, to send out and publish the results, to introduce them, or it is necessary to perform additional work for the completion of the theme. If the work requires introduction, the proposal on this, obviously, should be approved by the appropriate ministry. In these cases representatives of these ministries should be included on the commissions for the acceptance of the works, while the certificates of acceptance of the works should be approved not only by the Academy of Sciences, but also in the ministries which will introduce these works.

Scientific work, especially research work, cannot be strictly regulated. In many respects it is based on the initiative of the performers and at times requires great selfless efforts. Personal interests often have to be sacrificed for the sake of the success of an important collective work. The unity of the collective and the elimination of internal conflicts in it are of great importance for success. Therefore, the role of party organizations at scientific institutions is very great. Wherever the party organization works

poorly, an abnormal situation, which greatly hinders productive work, forms at the institutes. Our party organizations belong to different rayon committees, associate with each other too little, and share work experience too little.

It seems to me that it is necessary to use the positive experience of the Ural Scientific Center, where a council of secretaries of the party organizations of institutions of the Academy of Sciences of the entire Ural Region works. It seems advisable to examine the question of establishing such a council for Moscow institutions and, perhaps, for the oblast. Apparently, such councils will be useful at our centers and affiliates. The sharing of experience will be the basic task of the councils. Their decisions should be, obviously, not directive, but recommendatory.

We are devoting much attention to introduction. But we are availing ourselves too little of the possibilities of party organizations and are not establishing contacts with the party organizations of the plants and enterprises, where introduction is taking place. The little experience which exists in this area shows that such contact and the joint discussion of arising difficulties with the party organs of institutes and plants can yield a large positive impact.

There is another very important task which faces the USSR Academy of Sciences. The 27th party congress once again confirmed the peace-loving policy of our country. The problems of peace and disarmament have now become an important problem of mankind. Our country, in a unilateral manner, once again extended the moratorium on nuclear tests. Such a policy is receiving the endorsement of the world community, which is exerting greater and greater pressure on the administration of the United States of America, demanding the adoption of a decision on the halt of tests and the improvement of nuclear weapons and the shift to the path of disarmament. Our task is, by using contacts with foreign colleagues, to see to it that they would understand to what mankind will come, if the arms race and the improvement of weapons, especially nuclear weapons, are not stopped and nuclear tests are not halted. The results of the meeting at Reykjavik confirmed the urgency of this.

Reorganization, which should bring us to a more effective means of development, is now under way in the country. The role of science in this reorganization is one of the decisive ones. Therefore, we should devote the greatest attention to it and first of all ensure its accomplishment here, at the USSR Academy of Sciences.

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## Assembly Declaration

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 p 34

[Article under the rubric "The Session of the General Assembly of the USSR Academy of Sciences": "Declaration of the Participants in the General Assembly of the USSR Academy of Sciences"]

[Text] We Soviet scientists utterly and completely support the realistic, constructive, honest, and open position of the Soviet leadership, which was expressed at the meeting of General Secretary of the CPSU Central Committee M.S. Gorbachev with U.S. President R. Reagan at Reykjavik. This position is dictated by the realization of historical responsibility and by concern about the fate of the world and about the saving of civilization from nuclear death.

Our country advanced an exceptionally bold program, which makes it possible not only to accomplish a breakthrough in the matter of halting the arms race, but also to ensure for the first time a deep reduction in nuclear weapons. A realistic prospect has been afforded to eliminate already during the next 10 years all the nuclear weapons of the USSR and the United States.

The compromise proposals of the USSR completely conform to the genuine interests of the Soviet and American peoples and the peoples of the entire world. They are an outstanding example of the new political thinking in international relations.

To our profound regret, the positions of the American administration this time also did not make it possible to use the historical chance for the cardinal solution of the problems of war and peace. So far it has not been possible to break the dangerous trends which are leading to the stockpiling and improvement of abominable means of mass destruction. But, in spite of this, the summit meeting at Reykjavik is a most important event in international life. A qualitatively different situation, which no one can ignore any longer, has formed in the world.

We appeal to the people, who are at the helm of U.S. policy, to realize their responsibility to history, to draw sober conclusions, and to embark on the path which leads to the freeing of mankind from the terrible threat of universally destructive war. We appeal for the use of the achievements of science and technology only and exclusively for peaceful purposes and for the good of all countries and peoples.

We are confident that the scientists of the world and all people of good will will henceforth also step up the efforts in the struggle for the radical improvement of the international situation and in the struggle for life on earth.

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IMPROVEMENT OF REMUNERATION OF SCIENTISTS

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 35-37

[Article under the rubric "In the Presidium of the USSR Academy of Sciences": "On Measures on the Fulfillment of the Decree of the CPSU Central Committee, the USSR Council of Ministers, and the All-Union Central Council of Trade Unions 'On the Improvement of the Remuneration of the Labor of Scientists, Designers, and Process Engineers of Industry'"]

[Text] At present the institutions of the USSR Academy of Sciences are changing over to the new system of the remuneration of the labor of scientists. The Institute of State and Law of the USSR Academy of Sciences was one of the first to complete such a changeover. Academician V.N. Kudryavtsev, its director, told at a meeting of the Presidium of the USSR Academy of Sciences about the experience of working on the changeover of the institute to the new system of remuneration.

V.N. Kudryavtsev recalled the basic principles of the improvement of the remuneration of the labor of scientists: the closer connection of remuneration with the personal contribution of the staff member owing to the significant "spread" of salaries, the system of salary increments, and the optional nature of an academic degree for a number of positions; the facilitation of the occupational and official advancement of scientists and the broadening of the rights of the managers of scientific institutions in the settlement of many questions of the remuneration of the labor of staff members.

The partial replacement of competition by certification is an important distinction of the new system of remuneration: competition for the filling of a vacant position is retained only for newly arriving staff members.

All this makes it possible to make the management of the scientific institution more flexible.

In the opinion of V.N. Kudryavtsev, several provisions, which are specified in the decree of the Presidium of the USSR Academy of Sciences, are also very important: the keeping of the wage fund of scientific institutions stable for the five-year plan so that the reduction of the number of staff members cannot lead to its decrease; the need for the specification of the themes and the

improvement of the organizational structure of institutions with the elimination of inefficiently working subdivisions and those, whose themes do not correspond to the basic directions of work of the institutes; the improvement of the organization of labor, which makes it possible to perform work with a smaller number of personnel.

At the Institute of State and Law of the USSR Academy of Sciences the preparation for the changeover to the new system of remuneration took 3-4 months. A public commission made up of representatives of the board of directors, the party buro, and the trade union committee, which was also charged to formulate the general principles of the changeover, was established. The commission came to the conclusion that one should cut down, first, on poorly working staff members and, second, on those, who have substantially exceeded retirement age (for doctors of sciences--by 10 years, for candidates--by 5 years)--at the institute 10 of the 360 people prove to be such. It was recommended to cut seven professor-consultants, which also yielded a definite saving of the wage fund, and to eliminate the existing vacancies.

After the recommendations of the commission were discussed at a meeting of the board of directors, they were submitted to the assembly of the labor collective. After lengthy discussion the assembly endorsed the proposals of the commission.

Then a certification commission, more precisely, four commissions--in accordance with the number of departments--were formed. Since the new system was being introduced for the first time, the commission determined to which of the positions each staff member being certified corresponds. Subsequently the work should be simplified: it will be necessary only to determine whether the staff member corresponds to the position held by him. Owing to the preliminary work, including discussion at the assembly, the certification came off without conflicts: the board of directors did not receive any complaints about its conducting.

Two sectors were united and specific structural changes were made in small subdivisions, which also yielded a definite saving of the wage fund.

As a result of all the steps the total amount of the saving of the wage fund came per month to 5,500 rubles. With the approval by the order of the director of the appointments of staff members to new positions the salaries of 102 staff members were increased and 92 staff members--mainly young ones--were promoted. In all 3,800 rubles were spent on this. The remaining 1,600 rubles were left at the disposal of the board of directors for the payment of bonuses, the establishment of increments, and the hiring of consultants.

As a whole the experience of the Institute of State and Law showed that the changeover to the new system complicates the functions of managers: it is necessary to solve a large number of additional problems, including psychological problems. But, V.N. Kudryavtsev emphasized, precisely the willingness and ability of managers to solve such problems in the interests of increasing the efficiency of work also correspond to the spirit of the

documents of the 27th CPSU Congress and the measures, which are being implemented today for the fulfillment of the tasks set by the congress.

In response to a number of questions on the procedure of dismissing staff members, who have been recognized as not corresponding to the held position, the speaker explained: labor legislation requires that, if at the institute there is a vacant position, which is lower than the one held by the staff member previously and corresponds to his specialty, this position should be offered first of all precisely to him. If he rejects it, the administration does not have any obligations on placing this staff member in a job.

In response to a number of questions of members of the Presidium of the USSR Academy of Sciences L.Ya. Gervits, chief of the Planning and Finance Administration of the Presidium of the USSR Academy of Sciences, gave explanations. He emphasized that the certification commission formulates only recommendations on the conformity of a staff member to one position or another--the right to make a decision is granted to the director of the institution. A number of controversial questions are connected with the procedure of establishing salary increments. L.Ya. Gervits explained that the director of the institute has the right in connection with the conferment of an academic degree on the staff member to increase his salary by up to 50 rubles within the limits of the wage fund (as a whole the "spread" of salaries, he recalled, can achieve for several positions 100 rubles). With the permission of the Presidium, the salaries of chiefs of sectors and laboratories, which belong to departments and conduct research on the most important problems, can be increased by 50 rubles--also within the limits of the total wage fund. The salary of such chiefs will correspond to the salary of a chief of a department. This is done in order to free the administration from the need to complicate the structure of the institution for the sake of preserving the salaries of the scientists who merit that. Personal increments, which amount to up to 50 percent of the salary, can be paid to staff members who are engaged in research on the most important problems. The list of such problems is established in advance by the board of directors, while the complement of staff members, who receive these increments, is to be reviewed annually.

Somewhat more difficult problems are arising at recently established institutes, which have been operating only 1-2 years or even less than a year.

The staffs of such institutes are usually not completely manned, the personnel are quite young, and for the present it is difficult to evaluate the contribution of the staff members--they have been working for too short a time. Special decisions of the Presidium, perhaps, the increase of the total wage fund, will be needed for such institutes--there are only 5-10 of them at the USSR Academy of Sciences.

An unused saving of the wage fund at institutes, apparently, will no longer exist: they have been granted the right either to use this saving for increments or to channel it during the last quarter into the formation of the material stimulation fund, that is, into bonuses for staff members.

The deadline of the changeover to the new system of remuneration is specified by the decree of the Presidium of the USSR Academy of Sciences: during 1986 such a changeover should be completed. It is necessary, apparently, to give especially large institutes, with more than 500 staff members, more time for preparation and to change them over last of all--during the 4th quarter.

In conclusion President of the USSR Academy of Sciences A.P. Aleksandrov emphasized that it is necessary to approach in an individualized manner the changeover of institutes to the new system, taking into account all the peculiarities of their work. Perhaps, at some institutes, which are performing important and urgent jobs, the sharp reduction of the staff at this moment will prove to be inadvisable, since it will threaten the completion of these jobs.

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## PROPOSED PROCEDURE OF CHANGING CHARTER OF ACADEMY OF SCIENCES

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 38-45

[Article by Academician V.L. Ginzburg under the rubric "The Discussion of the Charter of the USSR Academy of Sciences": "On Several Changes in the Charter of the USSR Academy of Sciences and the Procedure of Introducing Additions in It"]

[Text] The Charter of the USSR Academy of Sciences is the basic document, which governs the goals of the academy, its activity, the rights and duties of its members, and so on. Of course, it should not be changed frequently. Since the founding of the Academy of Sciences in 1724 only nine charters have been in effect (including "The Draft of the Statute on the Founding of the Academy of Sciences and Arts," which prior to 1747 took the place of the officially approved charter, as well as the charter in effect at present, which was adopted in 1963). (Footnote 1) (In connection with the 250th anniversary of the USSR Academy of Sciences all the charters were published in the form of a book: "Ustav Akademii nauk SSSR. 1724-1974" [The Charters of the USSR Academy of Sciences. 1724-1974], Moscow, Nauka, 1975) True, from time to time corrections, additions, and changes were introduced in the charter. Thus, the charter now in effect has already been supplemented and changed 12 times, moreover, the last time was in 1984. (Footnote 2) ("Ustav Akademii nauk SSSR" [The Charter of the USSR Academy of Sciences], Moscow, 1984. Below we will mean exclusively this prevailing charter) A number of proposals of members of the academy, which concern the change of the charter, have already been sent to the Commission for the Review of Proposals on Corrections to the Charter of the USSR Academy of Sciences of the Presidium of the USSR Academy of Sciences. Such proposals also emerged, obviously, within the Presidium itself. Therefore, it is possible to expect that in the near future (probably in 1987) several changes will once again be made in the charter.

This article, which contains a number of proposals which concern necessary or desirable, in my opinion, additions to the charter, as well as the procedure of making changes in it, was also written in this connection. It goes without saying that any similar specific proposals are debatable, they are offered here precisely for discussion. But the need for the careful and necessarily open preparation of any changes of the charter seems indisputable. Just recently we all saw the example of the extensive open discussion of the new



version of the CPSU Program, as well as the CPSU By-Laws. Of course, the Charter of the USSR Academy of Sciences is a document of an entire different scale, there are no grounds to discuss it in the press at large. But it is possible and necessary to discuss questions connected with the charter on the pages of VESTNIK AKADEMII NAUK SSSR. Unfortunately, in the past, as far as I known, this was not done, but better late than never. A new stage of development, which requires both greater responsibility and greater openness, has begun for our country. Therefore, I hope that after the publication of this article others on the same theme will also follow. For the development of the USSR Academy of Sciences the questions connected with the charter are quite important.

#### What Is the Existing Practice of Introducing Additions and Changes in the Charter?

The proposals of members of the academy, which are being sent to the mentioned commission, and first of all those which originated in the Presidium itself, are examined, and those of them, which are selected by the commission and receive the endorsement of the Presidium, are submitted to the General Assembly of the Academy of Sciences. All the other proposals at best are reported in the report of the commission chairman, it is possible to mention them in discussions, but they are no longer subject to being put to a vote. Thus, the commission and Presidium, in reality, definitively reject any proposals which do not seem acceptable to them. Within my memory, with rare exceptions, only minor, to a significant extent technical or procedural issues were put to a vote. I recall only one instance (20 March 1981), when a fundamental and, what is the main thing, somewhat controversial issue was put to a vote. Here it appeared with all obviousness that the General Assembly, given the existing procedure of changes of the charter, in practice is incapable.

It was a question in the case under discussion of the procedure of approving the directors of scientific research institutions of the academy. In the charter (Paragraph 37) it is not specified how such approval should take place--by a show of hands or by secret ballot. Many people, including myself, believed and believe that all personnel issues should be settled at the General Assembly only by secret ballot. There are also, however, supporters of a show of hands. The discussions on this, in general, secondary issue at the General Assemblies have taken place repeatedly and have taken up in all significantly more time and efforts than are necessary for the solution of truly important problems. Finally, in 1981 the commission and Presidium decided all the same to introduce in the charter an addition on the necessity of a secret ballot when approving directors. But in a show of hands at the General Assembly the corresponding paragraph was not adopted, although, it seems about 175 academicians voted for it, while only 7 voted against it. How is that? Very simply.

According to Paragraph 78 of the Charter its change "is effected in accordance with a decision of the General Assembly of the Academy of Sciences, which has been adopted by not less than a two-thirds majority vote of the full members of the academy." For example, on 1 January 1986 there were 274 academicians, and, consequently, it was possible to change the charter by not less than

183 "aye" votes. Given the existing procedure this means, obviously, that for the change of the charter at the assembly a minimum of 183 academicians should be present. But in general slightly more than two-thirds of the total number of academicians are usually present at the assembly. Moreover, the concept of the registered staff of academicians exists (those on foreign business trips and those who are ill are not included in the corresponding list), while it is possible to open the General Assembly when two-thirds of the registered staff are present. Thus, a vote at the meeting can be taken in the presence of even less than two-thirds of the total number of academicians. Within my memory at the General Assemblies more than once there has even not been at all the quorum which is necessary for taking a vote. In any event, in certain cases several "nay" votes in case of approximately 175 "aye" votes were sufficient for a change of the charter not to be approved. I am no longer speaking about the imperfection of the system of a show of hands in a large hall, moreover, under conditions when far from only those who have the right to vote (in this case, academicians) are present. The repeatedly used practice of counting "for simplicity" only the "nay" votes and determining the "aye" votes by subtracting from the number of people registered at the assembly (meanwhile some of them, after all, have left, without waiting for the voting) also does not stand up to criticism. It is completely intolerable to adopt changes to the charter by the described method--this both is undemocratic and does not correspond to the responsibility, with which it is necessary to approach this issue.

#### The Proposed Procedure of Changes of the Charter

Without aspiring, of course, to some only possible solution, I will propose a certain procedure of making changes in the charter.

a) Within a reasonable time (say, half a year) before the General Assembly, at which it is proposed to change the charter, the members of the academy are notified of the possibility by a specific fixed date to submit their proposals to the commission for the change of the charter.

b) All the proposals, both those endorsed by the commission and Presidium and those not endorsed, are submitted to the corresponding General Assembly. Of course, the endorsed proposals have priority, for example, they are placed separately at the beginning of the list. Further a discussion takes place, moreover, all the proposals on the list can be discussed. The proposals endorsed by the Presidium come up for a subsequent decisive vote (see paragraph "c" below). As to the others, they should also be offered for a decisive vote, if by a show of hands more than half of the academicians present come out in favor of this (it is assumed, of course, that the assembly is competent, that is, more than two-thirds of the total number or registered staff of academicians are present at it, moreover, specification is needed here: in my opinion, in such cases it is more correct to use the total number of academicians).

c) The changes of the charter, which are thus placed to a vote, in accordance with a decision of the Presidium can be additionally discussed at the next meeting or even at the next General Assembly (in accordance with the procedure indicated in paragraph "b"). Then the changes, which are finally being put to

a vote, are sent to all the academicians, who also vote, so to speak, in writing and in so doing sign their name. Any violation of the regulations here is out of the question, since both now and in the proposed procedure the voting is open. Of course, if any of the academicians cannot or does not wish to vote, this is his right, then the ballot will simply not be taken into account. There are also no grounds to raise objections to the fact that people would abstain on some items or others. Those who voted "aye" need to count only those who did this openly (and did not, say, leave a blank ballot). A change of the charter is considered adopted only if not less than two-thirds of the total number of academicians voted "aye."

Such a procedure is reliable and at the same time quite simple, taking into account the importance of the issue and the fact that changes in the charter are made once every few years. I will note that I submitted proposals on the procedure of changing the charter, which are close to those present above, to the Commission for the Change of the Charter in a letter of 10 March 1982.

#### Proposed Additions to the Charter, Which Do Not Concern Election to the Academy of Sciences

The Presidium of the USSR Academy of Sciences at present is the only elected organ I know, which does not report back on its work during the next reelection. To the puzzled question: "How can this be and why?" I, if I got an answer at all, got just one: "At the annual General Assemblies of the academy reports are given, is this really insufficient?" As it seems to me, (Footnote 3) (I have already written about this and several other questions being broached here in a article, which was sent to VESTNIK AKADEMII NAUK SSSR in July 1985 and was published in No 4, 1986, pp 39-45) this is either a misunderstanding or simply an excuse. All the members of the academy know that in the statement of the chief scientific secretary of the Presidium and in the corresponding printed document a report only for the past year is given. Here, of course, the more general and long-term questions of the work of the academy are not touched upon or are nearly not touched upon in it. Meanwhile, the Presidium is elected for 5 years. The existence of annual reports (it is necessary, of course, to retain them) makes it possible during the reelection of the Presidium to discuss precisely the more general and fundamental questions with emphasis on the future. Thus, it is necessary (moreover, it is suggested here not for the notorious "check mark," but for the improvement of the work of the academy) that the reelection would be accompanied by a report of the Presidium. Thus, it is proposed to include in the charter the following paragraph or subparagraph:

"The reelection of the Presidium of the USSR Academy of Sciences is accompanied by a report of the Presidium for the past 5-year period and a broad discussion of the work of the academy and the plans of this work for the coming 5-year period."

It is also proposed to include in the charter the following subparagraph:

"If the election of the president of the USSR Academy of Sciences is conducted not jointly with the reelection of the entire Presidium, then no later than 3 months after the election the General Assembly is convened, at which the new

president presents his views on the work of the academy and the plans for the future, after which a discussion of his report takes place."

The point of this proposal, I hope, is quite clear. As to the precise wording, as in all other cases, it, perhaps, is still liable to refinement and polishing.

I also propose to include in the charter the following paragraphs, which concern the duties of the Presidium:

a) "The Presidium of the USSR Academy of Sciences is obliged within a period of not more than a year to respond in writing to all the requests and proposals, which have been addressed to it and are contained in the resolutions adopted at the annual General Assemblies of the departments."

b) "The Presidium is obliged within a period of not more than a year to respond in writing to all the requests and proposals of the members of the academy, which they make in their statements at the annual General Assembly of the academy or submit at this assembly in writing."

To those not acquainted with the practice of the work of the Presidium these proposals might seem strange and even bureaucratic. In fact, their inclusion in the charter is urgently necessary, for at present the Presidium does not consider it mandatory to react and respond in some way even to the resolutions of the General Assemblies of the departments, not to mention the proposals of individual members of the academy. At the annual General Assemblies of the General Physics and Astronomy Department from year to year we have addressed various requests and proposals to the Presidium. At each annual assembly all the paragraphs of the resolution of the previous annual assembly are enumerated in the report of the academician secretary (that is how it is done here and, of course, that is how it is necessary to act). And we learn that no response has been received to the majority of our requests and proposals. I will note, incidentally, that at the last annual assembly of the department (18 March 1986) paragraph "a" cited above, in which we ask that our proposals be responded to, was even included in the resolution. Speaking at the annual General Assembly of the Academy of Sciences in 1985, I dwelt specially on the question being discussed, (Footnote 4) (See VESTNIK AKADEMII NAUK SSSR, No 6, 1985, p 46), but so far have not received any response. I also advanced a number of proposals at the General Assembly of the academy in 1976 (Footnote 5) (See VESTNIK AKADEMII NAUK SSSR, No 9, 1976, p 57), but also without any results.

Incidentally, now it is a question not even of the results. It goes without saying that the proposals and requests of the departments and members of the academy might prove to be unacceptable and might be rejected by the Presidium. But it is impossible not even to respond to these proposals and not to consider them at all. Under such conditions the statements of the members of the academy at the General Assemblies usually become entirely useless and reduce to exercises in the art of public speaking. In order not to be incorrectly understood, I will emphasize that I am well aware of what an enormous flow of documents is received by the Presidium (the count runs into the hundreds of thousands or even millions a year). (Footnote 6) (See VESTNIK

AKADEMII NAUK SSSR, No 4, 1984, pp 39-45; LITERATURNAYA GAZETA, 19 March 1986). It is necessary to reduce this flow and to relieve the Presidium from paperwork. That is why it is also suggested above that the Presidium would be obliged to respond only to the resolutions of the annual General Assemblies of the department and to the statements or written proposals of members of the academy just once a year. Now a completely ridiculous situation has formed, when any "plaintiff" in our country receives a response, moreover, a large amount of forces (including of both the Presidium and the members of the Academy of Sciences) is spent on this, while entire departments of the academy and its members for years do not receive a response to their proposals.

In this article there is, of course, no opportunity to dwell on all the questions and proposals which are connected with the charter. Before touching upon the problem of election to the academy, I will make just two more remarks. How many times I have wanted to propose the following addition to the charter:

"All personnel issues are settled at the General Assembly of the academy by secret ballot."

The debates about how to approve directors of institutes were mentioned above. The supporters of a show of hands cite the fact that secret balloting takes place at the assembly of the departments, therefore, at the General Assembly of the academy it is no longer needed. But then, as has already been repeatedly noted, there is no need at all to hold a show of hands at the General Assembly, and it is possible to get by with the approval of the directors in the Presidium. In my conviction, which is based on many years of observations, a show of hands when approving directors at the General Assembly is a formality and a waste of time. A secret ballot makes sense, for it reveals the real opinion of the voters, and for that reason is useful from various standpoints.

In order to show what difference exists between a secret ballot and a show of hands at General Assemblies of the academy, I will cite an example. Once, when it had been possible to achieve secret balloting when approving directors, one of them received 90 "nay" votes. After several (it seems, 5) years the candidacy of the same director was again approved at the General Assembly by a show of hands, and only one "nay" vote was cast. Since the only "nay" vote belonged to me (and everyone, obviously, could see this), I will venture to note the following. It is impossible to explain the indicated enormous difference in the number of "nay" votes by some apprehensions of the voters, by the lack of courage, and so on (similar arguments were cited). It is simply that the open voting of "nay" at the General Assembly (and, generally speaking, in the presence of the person being voted for) is a demonstration. The majority of us are guided by business considerations and, in any case, do not want to organize demonstrations. In the mentioned case I also did not want this, but literally forced myself to vote "nay," for I had always spoken in favor of a secret ballot and did not want them to suspect me of cowardice when a show of hands was held.

Finally, as is clear from what has already been said, if changes of the charter were to be made by a judicious and democratic procedure, the proposed paragraph on secret balloting on all personnel issues would have already been introduced in it long ago (incidentally, when it is a question of the approval of directors, it is quite sufficient for less than half of the total number of academicians to have voted "nay"; thereby the approval of any director is practically guaranteed, so that there are no grounds for the Presidium to worry about this).

I will dwell, finally, on the observance of the charter. Paragraph 34 states: "The full members and corresponding members of the Academy of Sciences annually submit to the appropriate department of the Academy of Sciences a report on their activity. The reports of the full members and corresponding members of the Academy of Sciences are heard at the meetings of the Presidium of the USSR Academy of Sciences and the meetings of the bureaus of the departments." When in 1953 I was elected a corresponding member, soon I received a document, in which with a reference to Paragraph 34 of the Charter (at that time this was paragraph 13) I was ordered to submit a report containing, in particular, a list of publications for the year. The reference to the charter created an impression on me as a neophyte (or, simply speaking, a novice), and since that time I have submitted a report every year. Recently I looked over the accumulated 33 reports in order to ascertain how the number of publications has changed with time and so forth.

I wanted to find out how the situation with others also stood, but no such luck. It turned out that the submitting of reports is not the rule, but the exception. Thus, in one of the departments of the academy, to which about 40 people belong, only 1 member of the department submitted a report for 1985. With respect to another department, which is twofold larger, six reports were submitted (the data are for April 1986, when this article was written). That is how the charter is being "fulfilled."

It is hardly possible to regard Paragraph 34 of the Charter as especially important, although the submitting of annual reports seems entirely appropriate to me, while even the busiest member of the academy will find during the year the hour of time, which is necessary for this. In any event one thing is clear: either it is necessary to remove Paragraph 34 altogether or it is necessary to observe it. How is this to be ensured? This is no so simple a question--the fulfillment by members of the academy of their duties. Incidentally, with respect to the submitting of reports a written reminder or remark on the part of the Presidium would probably be sufficient.

#### Proposed Changes of the Charter, Which Are Connected With the Elections to the Academy of Sciences

The elections to the Academy of Sciences hold a special place in its life, people take a special interest in them. The interest in the elections to a considerable degree is explained by the act that election to the academy is an honor and at the same time involves direct and indirect material benefits. However, the significance of the elections, of course, is not confined to this. Apart from the interests of the USSR Academy of Sciences itself as the main scientific institution of the country, broad groups of the scientific

community follow the organization of the elections, their progress, and the results.

It is natural, therefore, that shortcomings in case of the organization and holding of elections adversely affect not only the academy, but also the moral climate of all Soviet science. It is possible, of course, to regard the talk about morals as demagoguery and to ignore moral principles and categories. I, however, am convinced of the opposite--of the enormous importance of the moral factor for all the life of the country and the Academy of Sciences in particular. Since in the past year they have begun to speak especially persistently and frequently about the moral factor, I will venture to note that much of what is contained in this article was stated in my letters to the Commission for the Change of the Charter of the USSR Academy of Sciences (1982, 1985). I also spoke about this at the end of the meeting of the General Assembly of the USSR Academy of Sciences on 25 December 1984, which was devoted to the latest election. Thus, I am addressing the discussed theme on the moral factor during elections not out of opportunistic considerations.

The ideal version of the election procedure is quite clear. It is necessary to hold them on a fixed date and, what is the main thing, without any special and additional places, places according to the geographic principle, the "exchange" of places, and so on and so forth. Such a system is not only most just, but also most simple and "pure." Unfortunately, I cannot expect the adoption of such a proposal (I will be very happy, of course, if I am mistaken).

I am submitting, therefore, more "moderate" proposals. They were presented in detail in a letter of 7 January 1985, which I sent to the Commission for the Change of the Charter. There is no opportunity here to go into details: this especially concerns the regulations which are recorded not in such a charter, but in the Statute on Elections to the USSR Academy of Sciences, which was approved by the General Assembly of the academy (incidentally, both the General Physics and Astronomy Department and I personally have, in addition to the charter, several "statutes," like the Statute on the Section of the Presidium of the USSR Academy of Sciences, at which you never look; but the Statute on Elections is so scarce that several of my attempts if only to look at it were not crowned with success).

Schematically my proposals are as follows:

a) The elections should be held on a fixed date, for example, in November-December of every odd year (the system of elections once every 3 years, which was recently adopted, is justified only by the fact that too much effort is being spent on them; however, the introduction of the proposed regulations will simplify the elections and will make it possible without particular difficulty to return to a more fair procedure--elections once every 2 years).

b) The regulations of the preparation of the elections--first of all it is a question of the number of vacancies and their description--should be fixed. In particular, it is necessary to discuss the corresponding questions in the bureaus of the departments before their settlement by the Presidium. The so-

called special vacancies, if it is not possible in general to reject them (in my opinion, this is very desirable), should also be announced in advanced.

c) The granting of additional places (in addition to those announced in the newspapers) should be strictly regulated. If during the voting "extra" candidates proved to be elected to the announced vacancies (that is, more candidates were elected than vacancies were announced), the Presidium has the right to allocate the additional places. However, this should occur after the completion of the elections for all the departments and be settled by the Presidium by a vote with the observance of specific procedural regulations.

d) It is time to make adjustments in the election regulations for the Siberian Department of the USSR Academy of Sciences, the establishment of which was, of course, an important and useful matter. Specifically, it would be possible to eliminate the two-stage elections to the Siberian Department, but to reserve for this department special vacancies. Now, as is known, the departments can vote only for the candidates for Siberia, who prior to this were elected by the Siberian Department; it turns out that laymen (for their most part) decide for whom of the nominated candidates the specialists in the departments of the Academy of Science can or cannot vote. It is especially necessary, of course, to stipulate that only people residing there can be candidate members of the Siberian Department.

The proposed refinements of the regulations are dictated by the practical experience of previous elections and are not too radical. But such steps in general would make it possible to eliminate several negative phenomena, which had to be faced during elections to the academy.

In conclusion I will repeat that with which I began. First, the additions and changes of the charter, which are proposed for voting, without fail should first become accessible to openness and be discussed quite extensively. Second, the procedure of making changes in the charter, in contrast to the existing procedure, should ensure the consideration of the opinion of the real majority of full members of the Academy of Sciences.

The charter, which has been changed and revised properly, will profit the matter and will contribute to the so necessary improvement of the work of the USSR Academy of Sciences.

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## AWARDS, PRIZES

KHLOPIN PRIZE AWARDED TO A.S. NIKIFOROV, V.S. KOLTUNOV

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 p 106

[Article under the rubric "News Items and Information": "The Awarding of Prizes of the USSR Academy of Sciences. The V.G. Khlopin Prize to A.S. Nikiforov and V.S. Koltunov"]

[Text] The Presidium of the USSR Academy of Sciences resolved to award the 1986 V.G. Khlopin Prize to Corresponding Member of the USSR Academy of Sciences Aleksandr Sergeyevich Nikiforov and Doctor of Chemical Sciences Valentin Sergeyevich Koltunov (the All-Union Scientific Research Institute of Inorganic Materials) for the work "The Theoretical Principles and the Results of the Practical Application of Redox Processes in the Extraction Technology of the Processing of Fuel."

The work of A.S. Nikiforov and V.S. Koltunov, which was awarded the prize, is devoted to the study of the kinetics and thermodynamics of redox reactions of actinide elements (mainly uranium, plutonium, and neptunium) in nitric acid solutions, as well as the processes of their stabilization in given degrees of oxidation. Redox processes are a section of the modern extraction technology of the processing of irradiated nuclear fuel.

Quantitative data on the rate and equilibrium constants, the activation energies, and the enthalpies of reactions are cited in the work. The majority of reactions cited in the work had previously not been studied. Among them are the redox reactions of ions of plutonium and neptunium with nitrite ions and with hydrazine and its derivatives, a number of reactions between ions of uranium, plutonium, and neptunium, as well as several catalytic reactions.

The work of A.S. Nikiforov and V.S. Koltunov is of great practical importance.

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## AWARDS, PRIZES

### SUPREME SOVIET AWARDS TO WORKERS OF SCIENCE

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 107-155

[Appendix of the Ukase of the Presidium of the USSR Supreme Soviet "On the Awarding of USSR Orders and Medals to Workers of Science"]

[Text] For the achieved successes in the fulfillment of the assignments of the 11th Five-Year Plan on the development of Soviet science and technology and the introduction of research results in the national economy to award:

For the RSFSR

The Bashkir ASSR

The Order of Labor Red Banner

Murat Abdulkhakovich Kamaletdinov--director of the Institute of Geology of the Bashkir Affiliate of the USSR Academy of Sciences.

The Order of Friendship of Peoples

Yuriy Borisovich Monakov--chief of a laboratory of the Institute of Chemistry of the Bashkir Affiliate of the USSR Academy of Sciences.

The Badge of Honor

Shamil Yamilovich Gilyazetdinov--chief of the Department of Biochemistry and Cytochemistry of the Bashkir Affiliate of the USSR Academy of Sciences.

Gennadiy Viktorovich Leplyanin--deputy director of the Institute of Chemistry of the Bashkir Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Galiya Gabbasovna Bikbayeva--senior scientific associate of the Institute of Chemistry of the Bashkir Affiliate of the USSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Valeriy Petrovich Orekhov--mechanic of the Institute of Chemistry of the Bashkir Affiliate of the USSR Academy of Sciences.

Svetlana Nikolayevna Shitova--senior scientific associate of the Institute of History, Language, and Literature of the Bashkir Affiliate of the USSR Academy of Sciences.

Rinad Salavatovich Yulmukhametov--junior scientific associate of the Department of Physics and Mathematics of the Bashkir Affiliate of the USSR Academy of Sciences.

#### The Buryat ASSR

#### The Order of Labor Red Banner

Aleksandr Leonidovich Kovalevskiy--senior scientific associate of the Geology Institute of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Badge of Honor

Gombo Shirapovich Radnaye--senior scientific associate of a department of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences.

Garmazhan Ludupovich Sanzhiyev--chief of a sector of the Buryat Institute of Social Sciences of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Ivan Aleksandrovich Kapterov--driver of a vehicle of the garage of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Kuzma Aleksandrovich Nikiforov--chief of a laboratory of the Buryat Institute of Natural Sciences of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Aleksandr Nikolayevich Bulgatov--senior scientific associate of the Geology Institute of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences.

Konstantin Ivanovich Osipov--junior scientific associate of the Institute of Biology of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences.

The Dagestan ASSR

The Badge of Honor

Alil Zaydilayevich Gadzhiyev--chief of a laboratory of the Institute of Physics of the Dagestan Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Svetlana Tsalistinovna Kotenko--senior scientific associate of the Department of Biology of the Dagestan Affiliate of the USSR Academy of Sciences.

Akhmed Ibragimovich Osmanov--deputy director of the Institute of History, Language, and Literature imeni G. Tsadasa of the Dagestan Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Dzhamaludin Gadzhiyevich Taymazov--senior engineer of the Institute of Problems of Geothermy of the Dagestan Affiliate of the USSR Academy of Sciences.

Umukhaybat Temirbekovna Temirbekova--senior scientific associate of the Institute of Geology of the Dagestan Affiliate of the USSR Academy of Sciences.

The Karelian ASSR

The Badge of Honor

Eyno Genrikhovich Karkhu--chief of a sector of the Institute of Language, Literature, and History of the Karelian Affiliate of the USSR Academy of Sciences.

Mikhail Mikhaylovich Stenar--deputy director of the Institute of Geology of the Karelian Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Vladimir Vasilyevich Bekrenev--driver of a vehicle of the motor pool of the Karelian Affiliate of the USSR Academy of Sciences.

Vitaliy Ivanovich Krutov--senior scientific associate of the Institute of Forestry of the Karelian Affiliate of the USSR Academy of Sciences.

Nina Abramovna Marshalova--scientific secretary of the Institute of Biology of the Karelian Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Alina Viktorovna Iyeshina--junior scientific associate of the Department of Water Problems of the Karelian Affiliate of the USSR Academy of Sciences.

Nikolay Aleksandrovich Karakulev--chief engineer of the Department of Mathematical Methods of the Automation of Scientific Research and Designing of the Karelian Affiliate of the USSR Academy of Sciences.

The Komi ASSR

The Badge of Honor

Vladimir Alekseyevich Dedeyev--chief of a department of the Institute of Geology of the Komi Affiliate of the USSR Academy of Sciences.

Nikolay Yegorovich Kochanov--chief of a laboratory of the Institute of Biology of the Komi Affiliate of the USSR Academy of Sciences.

Aleksey Titovich Khmel'nitskiy--chief accountant of the Komi Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Afanasiy Nikolayevich Turubanov--chief of a sector of the Institute of Language, Literature, and History of the Komi Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Galina Alekseyevna Knyazeva--chief of a sector of the Department of Economics of the Komi Affiliate of the USSR Academy of Sciences.

Natalya Aleksandrovna Ryzhova--junior scientific associate of the Institute of Biology of the Komi Affiliate of the USSR Academy of Sciences.

The Tatar ASSR

The Order of Friendship of Peoples

Igor Anatolyevich Tarchevskiy--director of the Kazan Institute of Biology of the Kazan Affiliate of the USSR Academy of Sciences.

The Badge of Honor

Andrey Oskarovich Vizel--senior scientific associate of the Institute of Organic and Physical Chemistry imeni A.Ye. Arbuzov of the Kazan Affiliate of the USSR Academy of Sciences.

Ildus Bariyevich Khaybullin--senior scientific associate of the Kazan Physical Technical Institute imeni Ye.K. Zavoyskiy of the Kazan Affiliate of the USSR Academy of Sciences.

Nil Gafurovich Yuzeyev--chief of a sector of the Institute of Language, Literature, and History imeni G. Ibragimov of the Kazan Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Robert Galeyevich Karimov--deputy chairman of the Presidium of the Kazan Affiliate of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Semen Grigoryevich Stepanov--mechanic of the pilot works of the Institute of Organic and Physical Chemistry imeni A.Ye. Arbuzov of the Kazan Affiliate of the USSR Academy of Sciences.

Khusain Khasanovich Khasanov--scientific consultant of the Institute of Language, Literature, and History imeni G. Ibragimov of the Kazan Affiliate of the USSR Academy of Sciences.

The Udmurt ASSR

The Badge of Honor

Aleksandr Ivanovich Ulyanov--senior scientific associate of the Physical Technical Institute of the Ural Scientific Center of the USSR Academy of Sciences.

The Yakut ASSR

The Order of Labor Red Banner

Vitaliy Vladimirovich Kovalskiy--director of the Institute of Geology of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

The Order of Friendship of Peoples

Vladimir Petrovich Larionov--deputy director of the Institute of Physical Technical Problems of the North of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

Igor Petrovich Shcherbakov--director of the Institute of Biology of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

The Badge of Honor

Vladimir Petrovich Gulyayev--scientific secretary of the Presidium of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

Nikodim Nikolayevich Yefimov--chief of a laboratory of the Institute of Space Physics Research and Aeronomy of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Spartak Stepanovich Neobutov--glass blower of the Institute of Geology of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Petr Timofeyevich Moskalev--automotive mechanic of the motor transport enterprise of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

Arkadiy Yegorovich Sleptsov--chief of a laboratory of the Institute of Mining of the North of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

Rudolf Vladimirovich Chzhan--senior scientific associate of the Institute of Permafrost of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Zoya Afanasyevna Kornilova--chief of a sector of the department of Economics of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

Nelli Mikhaylovna Nikitina--junior scientific associate of the Institute of Permafrost of the Siberian Department of the USSR Academy of Sciences.

Lidiya Ivanovna Rotayenko--inspector-reviewer of the Presidium of the Yakutsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### Altay Kray

#### The Medal "For Labor Prowess"

Yuriy Mikhaylovich Karateyev--tractor driver of the Altay experimental farm of the Siberian Department of the USSR Academy of Sciences.

#### Krasnoyarsk Kray

#### The Order of the October Revolution

Aleksandr Sergeyevich Isayev--chairman of the Presidium of the Krasnoyarsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Order of Labor Red Banner

Kirill Sergeyevich Aleksandrov--director of the Institute of Physics imeni L.V. Kirenskiy of the Siberian Department of the USSR Academy of Sciences.

#### The Badge of Honor

Boris Nikolayevich Kuznetsov--deputy director of the Institute of Chemistry and Chemical Technology of the Siberian Department of the USSR Academy of Sciences.

Fedor Yakovlevich Sidko--chief of a laboratory of the Institute of Biophysics of the Siberian Department of the USSR Academy of Sciences.

Nikolay Yakimovich Shaparev--chief of a laboratory of the Computer Center of the Siberian Department of the USSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Anatoliy Yegorovich Golovyrin--bus driver of the garage of the Krasnoyarsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Mariya Alekseyevna Bashinskaya--senior nurse of the hospital of the Krasnoyarsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

Aleksandr Ivanovich Rudakov--chief of a laboratory of the Computer Center of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Leonard Nikolayevich Bezmaternykh--chief of a laboratory of the Institute of Physics imeni L.V. Kirenskiy of the Siberian Department of the USSR Academy of Sciences.

Nina Yevgenyevna Sudachkova--chief of a laboratory of the Institute of Forestry and Timber imeni V.N. Sukachev of the Siberian Department of the USSR Academy of Sciences.

#### Maritime Kray

#### The Order of Labor Red Banner

Oleg Grigoryevich Kusakin--chief of a department of the Institute of Marine Biology of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Valentin Ivanovich Sergiyenko--deputy director of the Institute of Chemistry of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Vladimir Petrovich Shevtsov--chief of a laboratory of the Pacific Ocean Oceanology Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.



#### The Order of Friendship of Peoples

Andrey Ivanovich Krushanov--director of the Institute of History, Archeology, and Ethnography of the Peoples of the Far East of the Far Eastern Scientific Center of the USSR Academy of Sciences.

#### The Badge of Honor

Viktor Anatolyevich Akulichev--deputy director of the Pacific Ocean Oceanology Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Valeriy Grigoryevich Gonevchuk--scientific secretary of the Far Eastern Geology Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Valeriy Aleksandrovich Rasskazov--deputy director of the Pacific Ocean Institute of Bioorganic Chemistry of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Volf Grigoryevich Reyfman--chief of a laboratory of the Biology and Soil Science Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

#### The Order of Labor Glory 2d Degree

Petr Alekseyevich Khryapov--mechanic of the research vessel "Dmitriy Mendeleev" of the Institute of Oceanology imeni P.P. Shirshov of the USSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Yuriy Gavrilovich Voronoy--lathe operator of the Opyt experimental production and ship repair workshops of the Pacific Ocean Oceanology Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Viktor Yegorovich Gulev--driver of a vehicle of the garage of the Far Eastern Scientific Center of the USSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Pavel Sergeyevich Gordiyenko--chief of a laboratory of the Institute of Chemistry of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Aleksandr Sergeyevich Yeroshenko--senior scientific associate of the Biology and Soil Science Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Oleg Yevgenyevich Kovalchuk--chief of the Administration of Material and Technical Supply of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Aleksey Mikhaylovich Korotkiy--chief of a laboratory of the Pacific Ocean Institute of Geography of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Vladimir Georgiyevich Sakhno--chief of a laboratory of the Far Eastern Geology Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Raisa Mikhaylovna Yakovleva--deputy chief physician of the Hospital with a polyclinic of the Far Eastern Scientific Center of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Vasiliy Petrovich Dudka--senior engineer of a department of the research fleet of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Petr Semenovich Zorikov--scientific secretary of the Mountain Taiga Station imeni V.L. Komarov of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Viktor Aleksandrovich Kostenko--chief of a laboratory of the Biology and Soil Science Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Viktor Grigoryevich Lifshits--chief of a laboratory of the Institute of Automation and Control Processes with a computer center of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Vladimir Mikhaylovich Ogarkov--senior engineer of the Institute of Marine Biology of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Stanislav Nikolayevich Protasov--chief of a laboratory of the Pacific Ocean Oceanology Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Stavropol Kray

The Medal "For Labor Prowess"

Yuriy Yuryevich Balega--senior scientific associate of the Special Astrophysical Observatory of the USSR Academy of Sciences.

Khabarovsk Kray

The Order of Friendship of Peoples

Yuriy Aleksandrovich Kosygin--director of the Institute of Tectonics and Geophysics of the Far Eastern Scientific Center of the USSR Academy of Sciences.

#### The Badge of Honor

Vasiliy Grigoryevich Belousov--chief of a department of the Institute of Economic Research of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Grigoriy Stepanovich Starchukov--deputy director of the Institute of Tectonics and Geophysics of the Far Eastern Scientific Center of the USSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Stanislav Pakhomovich Bystritskiy--chief of a sector of the Institute of Economic Research of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Sergey Vladimirovich Makogonov--senior scientific associate of the Computer Center of the Far Eastern Scientific Center of the USSR Academy of Sciences.

#### Amur Oblast

##### The Badge of Honor

Anatoliy Fedorovich Mironyuk--chief of a laboratory of the Amur Complex Scientific Research Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

#### Gorkiy Oblast

##### The Order of Labor Red Banner

Vladimir Ilich Talanov--chief of a department of the Institute of Applied Physics of the USSR Academy of Sciences.

##### The Order of Labor Glory 3d Degree

Pavel Sergeyevich Fitasov--mechanic of the Institute of Applied Physics of the USSR Academy of Sciences.

##### The Medal "For Labor Prowess"

Yevgeniy Vasilyevich Zagryadskiy--chief engineer of the Institute of Applied Physics of the USSR Academy of Sciences.

##### The Medal "For Labor Distinction"

Petr Arkadyevich Kapustin--chief of a laboratory of the Institute of Applied Physics of the USSR Academy of Sciences.

Lev Vladimirovich Nikolayev--chief of a department of the Institute of Applied Physics of the USSR Academy of Sciences.

Ivanovo Oblast

The Badge of Honor

Boris Dmitriyevich Berezin--chief of a department of the Institute of Chemistry of Nonaqueous Solutions of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Vladimir Nikolayevich Afanasyev--chief of a laboratory of the Institute of Chemistry of Nonaqueous Solutions of the USSR Academy of Sciences.

Vera Vasilyevna Myasoyedova--chief of a sector of the Institute of Chemistry of Nonaqueous Solutions of the USSR Academy of Sciences.

Irkutsk Oblast

The Order of Labor Red Banner

Yuriy Nikolayevich Rudenko--director of the Siberian Power Engineering Institute of the Siberian Department of the USSR Academy of Sciences.

The Order of Friendship of Peoples

Nikolay Alekseyevich Logachev--chairman of the Presidium of the East Siberian Affiliate of the Siberian Department of the USSR Academy of Sciences.

Oleg Viktorovich Pavlov--deputy director of the Institute of the Earth's Crust of the Siberian Department of the USSR Academy of Sciences.

Ryurik Konstantinovich Salyayev--director of the Siberian Institute of Plant Physiology and Biochemistry of the Siberian Department of the USSR Academy of Sciences.

The Badge of Honor

Vadim Yakovlevich Govorukhin--chief of a sector of the Siberian Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation of the Siberian Department of the USSR Academy of Sciences.

Valeriy Dmitriyevich Kozlov--deputy director of the Institute of Geochemistry imeni A.P. Vinogradov of the Siberian Department of the USSR Academy of Sciences.

Boris Aleksandrovich Trofimov--chief of a laboratory of the Irkutsk Institute of Organic Chemistry of the Siberian Department of the USSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Ivan Afanasyevich Shumilov--carpenter of the pilot experimental machine workshops of the East Siberian Affiliate of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Gennadiy Anatolyevich Oparin--chief of a sector of the Irkutsk Computer Center of the Siberian Department of the USSR Academy of Sciences.

Boris Grigoryevich Saneyev--chief of a laboratory of the Siberian Power Engineering Institute of the Siberian Department of the USSR Academy of Sciences.

Valerian Afanasyevich Snytko--deputy director of the Institute of Geography of the Siberian Department of the USSR Academy of Sciences.

Boris Matveyevich Shmakin--chief of a laboratory of the Institute of Geochemistry imeni A.P. Vinogradov of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Natalya Nikolayevna Vlasova--senior scientific associate of the Irkutsk Institute of Organic Chemistry of the Siberian Department of the USSR Academy of Sciences.

Boris Filippovich Lut--chief of a laboratory of the Limnology Institute of the Siberian Department of the USSR Academy of Sciences.

Lyubov Alekseyevna Plyusnina--junior scientific associate of the Siberian Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation of the Siberian Department of the USSR Academy of Sciences.

Gennadiy Innokentyevich Filshin--chief of a sector of the Institute of Economics and the Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences.

#### Kaliningrad Oblast

#### The Medal "For Labor Prowess"

Vadim Petrovich Ivanov--chief of the Kaliningrad Magnetic Ionosphere Observatory of the Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation of the USSR Academy of Sciences.

Kaluga Oblast

The Badge of Honor

Mikhail Spartakovich Voroshilov--chief of a detachment of the experimental methods expedition of the Institute of Earth Physics imeni O.Yu. Shmidt of the USSR Academy of Sciences.

Kamchatka Oblast

Vladimir Ivanovich Belousov--deputy director of the Institute of Volcanology of the Far Eastern Scientific Center of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Gennadiy Aleksandrovich Karpov--senior scientific associate of the Institute of Volcanology of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Kemerovo Oblast

The Medal "For Labor Prowess"

Eduard Ivanovich Vitkovskiy--chief of a laboratory of the Institute of Coal of the Siberian Department of the USSR Academy of Sciences.

The City of Leningrad

The Order of Lenin

Zhores Ivanovich Alferov--chief of a department of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

The Order of the October Revolution

Vladimir Aleksandrovich Govyrin--director of the Institute of Physiology imeni I.P. Pavlov of the USSR Academy of Sciences.

The Order of Labor Red Banner

Vadim Vasilyevich Afrosimov--chief of a laboratory of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Boris Grigoryevich Belenkiy--chief of a laboratory of the Intsitute of High Molecular Compounds of the USSR Academy of Sciences.

Sergey Petrovich Zhdanov--chief of a laboratory of the Institute of Silicate Chemistry imeni I.V. Grebenshchikov of the USSR Academy of Sciences.

Viktor Nikolayevich Mayorov--chief of a laboratory of the Institute of Physiology imeni I.P. Pavlov of the USSR Academy of Sciences.

Boris Aleksandrovich Mamyrin--chief of a laboratory of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Yuriy Ivanovich Petrov--lathe operator of the Special Design Bureau of Analytical Instrument Making of the Scientific and Technical Association of the USSR Academy of Sciences.

#### The Order of Friendship of Peoples

Vadim Lvovich Gurevich--chief of a sector of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Vadim Filippovich Zaytsev--deputy director of the Zoology Institute of the USSR Academy of Sciences.

Nina Georgiyevna Lopatina--chief of a laboratory of the Institute of Physiology imeni I.P. Pavlov of the USSR Academy of Sciences.

Yevgeniy Fedorovich Panarin--chief of a laboratory of the Institute of High Molecular Compounds of the USSR Academy of Sciences.

Nikolay Viktorovich Tomilin--chief of a laboratory of the Institute of Cytology of the USSR Academy of Sciences.

Aleksandr Mikhaylovich Ugolev--chief of a laboratory of the Institute of Physiology imeni I.P. Pavlov of the USSR Academy of Sciences.

#### The Badge of Honor

Genriyetta Alekseyevna Albova--science editor of the Leningrad Department of the Science Publishing House.

Anatoliy Isidorovich Borisenko--chief of a laboratory of the Institute of Silicate Chemistry imeni I.V. Grebenshchikov of the USSR Academy of Sciences.

Lidiya Nikolayevna Gall--chief of laboratory of the Institute of Analytical Instrument Making of the Scientific and Technical Association of the USSR Academy of Sciences.

Dmitriy Zalmanovich Garbuzov--chief of a laboratory of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Mstislav Nikolayevich Gnevyshev--senior scientific associate of the Main Astronomical Observatory of the USSR Academy of Sciences.

Yuriy Sergeyevich Gordeyev--chief of a laboratory of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Nelli Pavlovna Danilova--chief of the Administration of the Organization of Scientific Research of the Leningrad Scientific Center of the USSR Academy of Sciences.

Sergey Mikhaylovich Zakharov--senior scientific associate of the Institute of Socioeconomic Problems of the USSR Academy of Sciences.

Yelena Aleksandrovna Ivannikova--senior scientific associate of the Leningrad Department of the Institute of Linguistics of the USSR Academy of Sciences.

Zoya Vladimirovna Karamysheva--chief of a laboratory of the Botany Institute imeni V.L. Komarov of the USSR Academy of Sciences.

Iyudmila Ilinichna Kiseleva--senior scientific associate of the Library of the USSR Academy of Sciences.

Viktor Nikolayevich Lvov--senior scientific associate of the Institute of Theoretical Astronomy of the USSR Academy of Sciences.

Nikolay Kuzmich Ostashko--physician of the Clinical Hospital of the USSR Academy of Sciences.

Aleksey Ilich Pavlovskiy--senior scientific associate of the Institute of Russian Literature (Pushkin House) of the USSR Academy of Sciences.

Viktor Nikolayevich Popov--chief of a laboratory of the Leningrad Department of the Mathematics Institute imeni V.A. Steklov of the USSR Academy of Sciences.

Vladimir Leonidovich Sviderskiy--director of the Institute of Evolutionary Physiology and Biochemistry imeni I.M. Sechenov of the USSR Academy of Sciences.

Vladimir Aleksandrovich Ugryumov--chief of a sector of the Leningrad Institute of Information Science and Automation of the USSR Academy of Sciences.

The Order of Labor Glory 2d Degree

Anatoliy Ivanovich Arkhipkin--milling machine operator of the Special Design Bureau of Analytical Instrument Making of the Scientific and Technical Association of the USSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Lev Ilich Vladimirov--lathe operator of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Andrey Ivanovich Makartsev--copier of the 1st Printing Plant of the Science Publishing House.

Nikolay Vladimirovich Markelov--carpenter of the Lenakademstroy Construction and Installation Administration of the USSR Academy of Sciences.



The Medal "For Labor Prowess"

Vladimir Timofeyevich Barsukov--chief of a department of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Vadim Sergeyevich Bochkarev--senior scientific associate of the Leningrad Department of the Institute of Archeology of the USSR Academy of Sciences.

Nikolay Aleksandrovich Glukhov--deputy director of the Institute of High Molecular Compounds of the USSR Academy of Sciences.

Magomed Abdul-Kadyrovich Dandamayev--chief of a sector of the Leningrad Department of the Institute of Oriental Studies of the USSR Academy of Sciences.

Taisiya Mikhaylovna Kitanina--senior scientific associate of the Leningrad Department of the Institute of History of the USSR of the USSR Academy of Sciences.

Gennadiy Sergeyevich Kulikov--senior scientific associate of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Stalina Yevgenyevna Mamayeva--senior scientific associate of the Institute of Cytology of the USSR Academy of Sciences.

Taisiya Stepanovna Ovsyanko--deputy chief of the Department of Scientific Personnel and Graduate Studies of the Leningrad Scientific Center of the USSR Academy of Sciences.

Anatoliy Yakovlevich Savostin--chief power engineer of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Mariya Vasilyevna Sazonova--senior scientific associate of the Institute of Silicate Chemistry imeni I.V. Grebenshchikov of the USSR Academy of Sciences.

Yelena Alekseyevna Stravinskaya--chief of a sector of the Institute of Limnology of the USSR Academy of Sciences.

Aleksandr Yegorovich Khovanskikh--chief of a laboratory of the Institute of Evolutionary Physiology and Biochemistry imeni I.M. Sechenov of the USSR Academy of Sciences.

Nikolay Nikolayevich Tsvelev--senior scientific associate of the Botany Institute imeni V.L. Komarov of the USSR Academy of Sciences.

Vera Georgiyevna Shalyapina--chief of a laboratory of the Institute of Physiology imeni I.P. Pavlov of the USSR Academy of Sciences.

Mariya Aleksandrovna Efendiyeva--scientific secretary of the Leningrad Department of the Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation of the USSR Academy of Sciences.

## The Medal "For Labor Distinction"

Inna Aramaisovna Vartanyan--senior scientific associate of the Institute of Evolutionary Physiology and Biochemistry imeni I.M. Sechenov of the USSR Academy of Sciences.

Gennadiy Petrovich Vlasov--chief of a laboratory of the Institute of High Molecular Compounds of the USSR Academy of Sciences.

Vadim Aleksandrovich Ivanov--senior scientific associate of the Institute of Cytology of the USSR Academy of Sciences.

Galina Nikolayevna Ionova--junior scientific associate of the Institute of Socioeconomic Problems of the USSR Academy of Sciences.

Vladimir Mikhaylovich Koltun--senior scientific associate of the Zoology Institute of the USSR Academy of Sciences.

Natalya Dmitriyevna Kochetkova--junior scientific associate of the Institute of Russian Literature (Pushkin House) of the USSR Academy of Sciences.

Nikolay Nikolayevich Ledentsov--junior scientific associate of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Gennadiy Mikhaylovich Losev--chief of a laboratory of the Leningrad Institute of Information Science and Automation of the USSR Academy of Sciences.

Nikolay Aleksandrovich Lyutorovich--junior scientific associate of the Library of the USSR Academy of Sciences.

Mariya Mikhaylovna Manuylova--senior scientific associate of the Institute of Precambrian Geology and Geochronology of the USSR Academy of Sciences.

Irina Fedorovna Milagina--design engineer of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Valentina Nikolayevna Polnyakova--supervisor of a group of the Leningrad Department of the All-Union State Institute for the Planning of Scientific Research Institutes and Laboratories of the USSR Academy of Sciences.

Iyudmila Mikhaylovna Saburova--senior scientific associate of the Leningrad Department of the Institute of Ethnography imeni N.N. Miklukho-Maklay of the USSR Academy of Sciences.

Valentina Nikolayevna Savenok--design engineer of the special design bureau of the Physical Technical Institute imeni A.F. Ioffe of the USSR Academy of Sciences.

Aleksey Yefremovich Spiridonov--driver of a vehicle of the Leningrad Garage of the USSR Academy of Sciences.

Zinaida Nikolayevna Trivashkevich--teacher of Nursery School No 100 of the Economic Administration of Leningrad Institutions of the USSR Academy of Sciences.

Roza Alekseyevna Udalova--senior scientific associate of the Botany Institute imeni V.L. Komarov of the USSR Academy of Sciences.

Yuriy Yevgenyevich Shelepin--senior scientific associate of the Institute of Physiology imeni I.P. Pavlov of the USSR Academy of Sciences.

Leningrad Oblast

The Order of Labor Red Banner

Renard Grigoryevich Pikulik--chief engineer of the reactor of the Leningrad Institute of Nuclear Physics imeni B.P. Konstantinov of the USSR Academy of Sciences.

The Badge of Honor

Yevgeniy Ilich Zabidarov--chief of a department of the Leningrad Institute of Nuclear Physics imeni B.P. Konstantinov of the USSR Academy of Sciences.

Stanislav Viktorovich Kirillov--chief of a sector of the Leningrad Institute of Nuclear Physics imeni B.P. Konstantinov of the USSR Academy of Sciences.

Anatoliy Pavlovich Serebrov--chief of a laboratory of the Leningrad Institute of Nuclear Physics imeni B.P. Konstantinov of the USSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Aleksandr Fedorovich Kurilshchikov--mechanic of the Leningrad Institute of Nuclear Physics imeni B.P. Konstantinov of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

German Aleksandrovich Korolev--senior scientific associate of the Leningrad Institute of Nuclear Physics imeni B.P. Konstantinov of the USSR Academy of Sciences.

Boris Ganyevich Turukhano--senior scientific associate of the Leningrad Institute of Nuclear Physics imeni B.P. Konstantinov of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Gennadiy Andreyevich Kovalev--director of the House of Physical Culture of the Leningrad Institute of Nuclear Physics imeni B.P. Konstantinov of the USSR Academy of Sciences.

Magadan Oblast

The Medal "For Labor Prowess"

Vladimir Yakovlevich Borkhodoyev--junior scientific associate of the Northeastern Complex Scientific Research Institute of the Far Eastern Scientific Center of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Aleksandr Yakovlevich Kondratyev--senior scientific associate of the Institute of Biological Problems of the North of the Far Eastern Scientific Center of the USSR Academy of Sciences.

The City of Moscow

The Order of Lenin

Grigoriy Aleksandrovich Avsyuk--deputy director of the Institute of Geography of the USSR Academy of Sciences.

Khabib Minachevich Minachev--chief of a laboratory of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Timur Timofeyevich Timofeyev--director of the Institute of the International Workers' Movement of the USSR Academy of Sciences.

Konstantin Vasilyevich Frolov--vice president of the USSR Academy of Sciences.

Fedor Vasilyevich Chukhrov--director of the Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry of the USSR Academy of Sciences.

The Order of the October Revolution

Aleksandr Ivanovich Anchishkin--director of the Institute of Economics and the Forecasting of Scientific and Technical Progress of the USSR Academy of Sciences.

Raisa Grigoryevna Butenko--chief of a laboratory of the Institute of Plant Physiology imeni K.A. Timiryazev of the USSR Academy of Sciences.

Artem Aramovich Goedekyan--deputy chairman of the Earth Sciences Section of the Presidium of the USSR Academy of Sciences.

Leonid Veniaminovich Keldysh--chief of a sector of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Cheslav Vasilyevich Kopetskiy--director of the Institute of Problems of the Technology of Microelectronics and Ultrafine Materials of the USSR Academy of Sciences.

Vladlen Arkadyevich Martynov--deputy director of the Institute of World Economics and International Relations of the USSR Academy of Sciences.

Oled Matveyevich Nefedov--chief of a laboratory of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Yuriy Vladimirovich Sachkov--chief of a department of the Institute of Philosophy of the USSR Academy of Sciences.

Solomon Aronovich Kheyman--chief of a sector of the Institute of Economics of the USSR Academy of Sciences.

The Order of Labor Red Banner

Vitaliy Vasilyevich Adushkin--chief of a laboratory of the Institute of Earth Physics imeni O.Yu. Shmidt of the USSR Academy of Sciences.

Lev Nikolayevich Andreyev--director of the Main Botanical Garden of the USSR Academy of Sciences.

Valentin Mikhaylovich Berezhkov--editor in chief of the journal SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA of the USSR Academy of Sciences.

Oleg Nikolayevich Bykov--deputy director of the Institute of World Economics and International Relations of the USSR Academy of Sciences.

Anatoliy Veniaminovich Vannikov--deputy director of the Institute of Electrochemistry imeni A.N. Frumkin of the USSR Academy of Sciences.

Vitas Antonovich Grazhulis--deputy director of the Institute of Solid-State Physics of the USSR Academy of Sciences.

Anatoliy Petrovich Gusenkov--deputy director of the Institute of Machine Science imeni A.A. Blagonravov of the USSR Academy of Sciences.

Vladimir Ivanovich Dianov-Klokov--chief of a department of the Institute of Atmospheric Physics of the USSR Academy of Sciences.

Mikhail Mikhaylovich Dubinin--chief of a department of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Mark Yefremovich Zhabotinskiy--chief of a laboratory of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Aleksey Borisovich Zhizhchenko--scientific secretary of the Mathematics Department of the USSR Academy of Sciences.

Leonid Ivanovich Zakharkin--chief of a laboratory of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Boris Iosifovich Koval--deputy director of the Institute of the International Workers' Movement of the USSR Academy of Sciences.

Vladimir Semenovitch Kruzhdov--senior scientific associate-consultant of the Institute of Sociological Research of the USSR Academy of Sciences.

Vitaliy Fedorovich Kuleshov--deputy chairman of the Physical Technical and Mathematical Sciences Section of the Presidium of the USSR Academy of Sciences.

Nikolay Nikolayevich Kulov--deputy director of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Vladimir Yakovlevich Laverychev--chief of a sector of the Institute of History of the USSR of the USSR Academy of Sciences.

Boris Mikhaylovich Lazarev--chief of a sector of the Institute of State and Law of the USSR Academy of Sciences.

Nikolay Nikolayevich Modyanov--senior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Ilya Iosifovich Moiseyev--chief of a laboratory of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Mark Aleksandrovich Mokulskiy--director of the Institute of Molecular Genetics of the USSR Academy of Sciences.

Viktor Vasilyevich Nazarov--driver of a vehicle of the Moscow Garage of the USSR Academy of Sciences.

Yevgeniy Ivanovich Popov--chief of a laboratory of the Institute of Earth Physics imeni O.Yu. Shmidt of the USSR Academy of Sciences.

Yuriy Petrovich Popov--deputy director of the Institute of Applied Mathematics imeni M.V. Keldysh of the USSR Academy of Sciences.

Vladimir Iosifovich Rekharskiy--deputy director of the Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry of the USSR Academy of Sciences.

Viktor Yefimovich Semenenko--chief of a laboratory of the Institute of Plant Physiology imeni K.A. Timiryazev of the USSR Academy of Sciences.

Yuriy Aleksandrovich Surkov--chief of a laboratory of the Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy of the USSR Academy of Sciences.

Vladimir Aleksandrovich Tartakovskiy--chief of a laboratory of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Natalya Leonidovna Timofeyeva--assistant of the president of the USSR Academy of Sciences.

Marina Yevgenyevna Trigubenko--chief of a department of the Institute of Economics of the World Socialist System of the USSR Academy of Sciences.

Grigoriy Gaykovich Chakhmakhchev--administrator of affairs of the USSR Academy of Sciences.

Evald Emilyevich Shpilrayn--chief of a department of the Institute of High Temperatures of the USSR Academy of Sciences.

Revol'd Mikhaylovich Entov--chief of a sector of the Institute of World Economics and International Relations of the USSR Academy of Sciences.

Viktoriya Nikolayevna Yartseva--chief of a sector of the Institute of Linguistics of the USSR Academy of Sciences.

#### The Order of Friendship of Peoples

Nazhmutin Gadzhimagomedovich Abdulayev--senior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Vitaliy Vasilyevich Aristov--deputy director of the Institute of Problems of the Technology of Microelectronics and Ultrafine Materials of the USSR Academy of Sciences.

Vasiliy Menandrovich Belikov--chief of a laboratory of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Aleksandr Abramovich Galkin--chief of a department of the Institute of the International Workers' Movement of the USSR Academy of Sciences.

Yuriy Filippovich Golubev--senior scientific associate of the Institute of Applied Mathematics imeni M.V. Keldysh of the USSR Academy of Sciences.

Anatoliy Alekseyevich Dorodnitsyn--director of the Comper Center of the USSR Academy of Sciences.

Ivan Stepanovich Zheludev--chief of a laboratory of the Institute of Crystallography imeni A.V. Shubnikov of the USSR Academy of Sciences.

David Solomonovich Zhuk--chief of a laboratory of the Institute of Petrochemical Synthesis imeni A.V. Topchiyev of the USSR Academy of Sciences.

Viktor Mikhaylovich Zhulin--deputy director of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Yuriy Ivanovich Zhuravlev--chief of a department of the Computer Center of the USSR Academy of Sciences.

Aleksandr Grigoryevich Zakharov--director of the Natural Sciences Library of the USSR Academy of Sciences.

Vilen Nikolayevich Ivanov--director of the Institute of Sociological Research of the USSR Academy of Sciences.

Igor Borisovich Ivanov--scientific secretary of Geology, Geophysics, Geochemistry, and Mining Sciences Department of the USSR Academy of Sciences.

Aleksandr Yulyevich Ishlinskiy--director of the Institute of Problems of Mechanics of the USSR Academy of Sciences.

Yuriy Nikolayevich Karaulov--director of the Institute of the Russian Language of the USSR Academy of Sciences.

Eduard Viktorovich Klopov--chief of a department of the Institute of the International Workers' Movement of the USSR Academy of Sciences.

Gennadiy Viktorovich Kozlov--chief of a laboratory of the Institute of General Physics of the USSR Academy of Sciences.

Aleksandr Ivanovich Krasovskiy--chief of a department of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Boris Antonovich Kuznetsov--chief of a department of the All-Union Institute of Scientific and Technical Information.

Olga Nikolayevna Kulayeva--chief of a laboratory of the Institute of Plant Physiology imeni K.A. Timiryazev of the USSR Academy of Sciences.

Yevgeniy Aleksandrovich Lebedev--chief of a department of the Institute of Oriental Studies of the USSR Academy of Sciences.

Sergey Aleksandrovich Makashin--senior scientific associate of the Institute of World Literature imeni A.M. Gorkiy of the USSR Academy of Sciences.

Nikolay Andreyevich Makhutov--chief of a department of the Institute of Machine Science imeni A.A. Blagonravov of the USSR Academy of Sciences.

Arkadiy Beynusovich Migdal--chief of a sector of the Institute of Theoretical Physics imeni L.D. Landau of the USSR Academy of Sciences.

Sergey Mikhaylovich Nikitin--chief of a department of the Institute of World Economics and International Relations of the USSR Academy of Sciences.

Petr Mikhaylovich Rubtsov--senior scientific associate of the Institute of Molecular Biology of the USSR Academy of Sciences.

Grigoriy Nikolayevich Sevostyanov--chief of a sector of the Institute of General History of the USSR Academy of Sciences.



Grigoriy Lvovich Slonimskiy--chief of a laboratory of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Kliment Nikolayevich Trubetskoy--chief of a laboratory of the Institute of Problems of the Complex Utilization of Mineral Resources of the USSR Academy of Sciences.

Irina Vasilyevna Khvorova--chief of a laboratory of the Geology Institute of the USSR Academy of Sciences.

Gazanfer Nikolayevich Shanshiyev--chief of a department of the Institute of Marxism-Leninism attached to the CPSU Central Committee.

The Badge of Honor

Sergey Ivanovich Aksenov--deputy director of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Yurik Vartanovich Arutyunyan--chief of a sector of the Institute of Ethnography imeni N.N. Miklukho-Makalay of the USSR Academy of Sciences.

Leonid Ivanovich Barsukov--senior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Nikolay Ivanovich Belyayev--deputy chief of the Foreign Relations Administration of the USSR Academy of Sciences.

Pavel Nikolayevich Boyko--chief of a sector of the Institute of Latin America of the USSR Academy of Sciences.

Valentina Aleksandrovna Bormotova--deputy chief physician of the Central Clinical Hospital with a polyclinic of the USSR Academy of Sciences.

Vladimir Alekseyevich Borodayev--senior scientific associate of the Institute of Latin America of the USSR Academy of Sciences.

Yuriy Nikolayevich Burtsev--chief of a laboratory of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Nina Sergeyevna Bykova--foreman of the glass blowing workshop of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Zinaida Iosifovna Vasileyva--painter of the special design bureau of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Aleksandr Lvovich Velikanov--deputy director of the Institute of Water Problems of the USSR Academy of Sciences.

Andrey Alekseyevich Velichko--chief of a laboratory of the Institute of Geography of the USSR Academy of Sciences.

Maksim Gavrilovich Vinogradov--senior scientific associate of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Adolf Nikolayevich Volkov--mechanic of the experimental plant of scientific instrument making of the Scientific and Technical Association of the USSR Academy of Sciences.

Erik Mikhaylovich Galimov--chief of a laboratory of the Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy of the USSR Academy of Sciences.

Tatyana Ilinichna Galkina--senior scientific associate of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Marlen Pavlovich Gapochka--deputy director of the Institute of Scientific Information on the Social Sciences of the USSR Academy of Sciences.

Nikolay Alekseyevich Generalov--deputy director of the Institute of Problems of Mechanics of the USSR Academy of Sciences.

Yevgeniy Borisovich Gledzer--senior scientific associate of the Institute of Atmospheric Physics of the USSR Academy of Sciences.

Mara Aleksandrovna Glushkova--scientific secretary of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Eduard Emmanuilovich Godik--chief of a laboratory of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Nikolay Nikolayevich Godovikov--deputy director of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Leonid Moiseyevich Gudoshnikov--chief of a sector of the Institute of the Far East of the USSR Academy of Sciences.

Viktor Semenovich Gurfinkel--chief of a laboratory of the Institute of Problems of Information Transmission of the USSR Academy of Sciences.

Anatoliy Konstantinovich Gushchin--senior scientific associate of the Mathematics Institute imeni V.A. Steklov of the USSR Academy of Sciences.

Roald Gamidovich Dzhamalov--chief of a laboratory of the Institute of Water Problems of the USSR Academy of Sciences.

Grigoriy Vladimirovich Domogatskiy--chief of a laboratory of the Institute of Nuclear Research of the USSR Academy of Sciences.

Yelena Ioasafovna Druzhinina--senior scientific associate of the Institute of History of the USSR of the USSR Academy of Sciences.

Ruben Nikolayevich Yevstigneyev--chief of a department of the Institute of Economics of the World Socialist System of the USSR Academy of Sciences.

Yuriy Sergeyevich Yeliseyev--deputy director of the Institute of Linguistics of the USSR Academy of Sciences.

Emil Borisovich Yershov--deputy director of the Central Institute of Economics and Mathematics of the USSR Academy of Sciences.

Vsevolod Vatslavovich Zhokhovskiy--chief of a sector of the All-Union Institute of Scientific and Technical Information.

Galina Ivanovna Zaporozhets--chief of the Production Planning Department of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Aleksandr Valentinovich Zakharov--scientific secretary of the Institute of Space Research of the USSR Academy of Sciences.

Inessa Aleksandrovna Zakharova--chief of a sector of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Valeriy Grigoryevich Zakhvatkin--senior scientific associate of the All-Union Institute of Scientific and Technical Information.

Inna Fedorovna Zenkevich--assistant of the vice president of the USSR Academy of Sciences.

Eduard Petrovich Zinkevich--senior scientific associate of the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsov of the USSR Academy of Sciences.

Vladimir Mikhaylovich Zubkov--deputy director of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Viktor Ivanovich Zyuzin--packer of Warehouse No 15 of the Central Supply Administration of the USSR Academy of Sciences.

Vyacheslav Alekseyevich Ivanov--junior scientific associate of the Institute of General Physics of the USSR Academy of Sciences.

Lev Lvovich Kiselev--chief of a laboratory of the Institute of Molecular Biology of the USSR Academy of Sciences.

Georgiy Anatolyevich Kobzev--deputy director of the Institute of High Temperatures of the USSR Academy of Sciences.

Andrey Afanasyevich Kokoshin--deputy director of the Institute of the United States of America and Canada of the USSR Academy of Sciences.

Lyudmila Nikolayevna Konstantinova--senior engineer of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Aleksey Alekseyevich Kotelnikov--deputy director of the Institute of New Chemical Problems of the USSR Academy of Sciences.

Viktor Petrovich Krasovskiy--acting chief of a sector of the Institute of Economics of the USSR Academy of Sciences.

Mikhail Mikhaylovich Krayushkin--chief of a laboratory of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Nikolay Nikolayevich Krot--chief of a laboratory of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Tamara Nikolayevna Kuzmina--deputy chief of the Planning and Finance Administration of the USSR Academy of Sciences.

Vladislav Aleksandrovich Lektorskiy--chief of a sector of the Institute of Philosophy of the USSR Academy of Sciences.

Tatyana Mikhaylovna Leontyeva--chief of a sector of the All-Union Institute of Scientific and Technical Information.

Gennadiy Grigoryevich Litavrin--chief of a sector of the Institute of Slavic and Balkan Studies of the USSR Academy of Sciences.

Sergey Minovich Loktev--deputy director of the Institute of Petrochemical Synthesis imeni A.V. Topchiyev of the USSR Academy of Sciences.

Konstantin Nikolayevich Lomunov--chief of a department of the Institute of World Literature imeni A.M. Gorkiy of the USSR Academy of Sciences.

Lev Borisovich Luganskiy--deputy director of the Institute of Physical Problems imeni S.I. Vavilov of the USSR Academy of Sciences.

Boris Alekseyevich Maksimov--senior scientific associate of the Institute of Crystallography imeni A.V. Shubnikov of the USSR Academy of Sciences.

Dmitriy Nikolayevich Maksimov--chief of a sector of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Tatyana Alekseyevna Mastryukova--chief of a laboratory of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Nikolay Vasilyevich Makhrov--deputy director of the Central Institute of Economics and Mathematics of the USSR Academy of Sciences.

Sergey Viktorovich Meyyen--senior scientific associate of the Geology Institute of the USSR Academy of Sciences.

Yulian Konstantinovich Mikhalev--senior scientific associate of the Institute of Machine Science imeni A.A. Blagonravov of the USSR Academy of Sciences.

Lev Mukharamovich Mukhametov--deputy director of the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsov of the USSR Academy of Sciences.

Vladimir Nikolayevich Nezavibatko--chief of a laboratory of the Institute of Molecular Genetics of the USSR Academy of Sciences.

Lyudmila Borisovna Nikolayeva--scientific secretary of the Institute of Oceanology imeni P.P. Shirshov of the USSR Academy of Sciences.

Nina Aleksandrovna Ozerova--senior scientific associate of the Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry of the USSR Academy of Sciences.

Viktor Vasilyevich Onopriyenko--senior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Irina Mikhaylovna Osadchaya--acting chief of a sector of the Institute of World Economics and International Relations of the USSR Academy of Sciences.

Sergey Illarionovich Pishchikov--deputy director of the Institute of High Temperatures of the USSR Academy of Sciences.

Svetlana Aleksandrovna Pletneva--chief of a sector of the Institute of Archeology of the USSR Academy of Sciences.

Sergey Mikhaylovich Plekhanov--chief of a department of the Institute of the United States of America and Canada of the USSR Academy of Sciences.

Aleksandr Aleksandrovich Pomanskiy--chief of a laboratory of the Institute of Nuclear Research of the USSR Academy of Sciences.

Yakov Aleksandrovich Ponomarev--senior scientific associate of the Institute of Psychology of the USSR Academy of Sciences.

Vasiliy Andreyevich Ponomarenko--chief of a laboratory of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Gennadiy Ivanovich Rassokhin--chief of a department of the All-Union Institute of Scientific and Technical Information.

Andrey Nikolayevich Rekesh--acting deputy director of the Institute of Molecular Genetics of the USSR Academy of Sciences.

Vladimir Yakovlevich Repin--manager of Planning Workshop No 3 of the All-Union State Institute of the Planning of Scientific Research Institutes of Laboratories of the USSR Academy of Sciences.

Tatyana Grigoryevna Runova--senior scientific associate of the Institute of Geography of the USSR Academy of Sciences.

Boris Leontyevich Rybalov--chief of a laboratory of Expedition No 1 of the Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry of the USSR Academy of Sciences.

Dmitriy Petrovich Skulachev--chief of a sector of the Institute of Space Research of the USSR Academy of Sciences.

Dmitriy Ippolitovich Slovetzkiy--senior scientific associate of the Institute of Petrochemical Synthesis imeni A.V. Topchiyev of the USSR Academy of Sciences.

Vyacheslav Aleksandrovich Smirnov--chief of a sector of the Institute of Power Engineering Research.

Igor Ilich Sobelman--chief of a laboratory of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Gennadiy Aleksandrovich Sobolev--chief of a laboratory of the Institute of Earth Physics imeni O.Yu. Shmidt of the USSR Academy of Sciences.

Alla Nikolayevna Stankina--chief of a department of the Committee for Lenin and USSR State Prizes in Science and Technology attached to the USSR Council of Ministers.

Svetlana Nikolayevna Tolstaya--chief of a laboratory of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Dmitriy Aleksandrovich Topchiyev--chief of a laboratory of the Institute of Petrochemical Synthesis imeni A.V. Topchiyev of the USSR Academy of Sciences.

Genrikh Aleksandrovich Trofimenko--chief of a department of the Institute of the United States of America and Canada of the USSR Academy of Sciences.

Vladimir Aleksandrovich Tumanov--chief of a sector of the Institute of State and Law of the USSR Academy of Sciences.

Yunir Abdulloovich Urmantsev--senior scientific associate of the Institute of Plant Physiology imeni K.A. Timiryazev of the USSR Academy of Sciences.

Vladimir Yakovlevich Faynberg--chief of a sector of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Dmitriy Valerianovich Fedoseyev--chief of a laboratory of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Valentin Vasilyevich Fedkin--scientific secretary of the Institute of Experimental Mineralogy of the USSR Academy of Sciences.

Vilyam Rizatdinovich Khisamutdinov--chief of a department of the Institute of Scientific Information on the Social Sciences of the USSR Academy of Sciences.

Lyudmila Ivanovna Khrennikova--assistant of the chief scientific secretary of the Presidium of the USSR Academy of Sciences.

Valentin Alekseyevich Chanturiy--chief of a laboratory of the Institute of Problems of the Complex Utilization of Mineral Resources of the USSR Academy of Sciences.

Yuriy Ivanovich Chernov--chief of a laboratory of the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsov of the USSR Academy of Sciences.

Vladimir Vasilyevich Chukanov--deputy director of the Institute of Molecular Biology of the USSR Academy of Sciences.

Olga Alekseyevna Chuprunova--senior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Stanislav Sergeyevich Shatalin--chief of a laboratory of the All-Union Scientific Research Institute of Systems Research.

Petr Filimonovich Shvetsov--chief of a department of the Institute of the Lithosphere of the USSR Academy of Sciences.

Yuriy Dmitriyevich Shmyglevskiy--chief of a department of the Computer Center of the USSR Academy of Sciences.

Boris Mikhaylovich Shustov--scientific secretary of the Astronomy Council of the USSR Academy of Sciences.

Viktor Selivestrovich Shcherbatyuk--senior scientific associate of the Institute of the International Workers' Movement of the USSR Academy of Sciences.

Yevgeniy Dmitriyevich Shchukin--chief of a laboratory of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Yuriy Vasilyevich Yaremenko--deputy director of the Central Institute of Economics and Mathematics of the USSR Academy of Sciences.

The Order of Labor Glory 2d Degree

Nikolay Nikolayevich Komissarov--mechanic of the Institute of Space Research of the USSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Vitaliy Georgiyevich Balabolichev--milling machine operator of the experimental plant of scientific instrument making of the Scientific and Technical Association of the USSR Academy of Sciences.

Nail Akhmetovich Gareyev--tuner of radio equipment of the experimental plant of scientific instrument making of the Scientific and Technical Association of the USSR Academy of Sciences.

Vitaliy Fedorovich Golubev--carpenter of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Mariya Alekseyevna Kidryashkina--janitor of the Housing and Municipal Services Administration of the Administration of Affairs of the USSR Academy of Sciences.

Viktor Ivanovich Kozhin--printer of the 2d Printing Plant of the Science Publishing House.

Nikolay Aleksandrovich Kornev--mechanic-repairman of the special design bureau of the All-Union Institute of Scientific and Technical Information.

Valeriy Illarionovich Kuznetsov--leader of the brigade of electric and gas welders of the Administration of Mechanization and Motor Transport of the Central Construction Administration of the USSR Academy of Sciences.

Ivan Dmitriyevich Loboyko--leader of a brigade of sanitary engineering mechanics of Construction and Installation Administration No 7 of the Central Construction Administration of the USSR Academy of Sciences.

Mikhail Fedorovich Matyukhin--mechanic of the special design bureau of the Institute of High Temperatures of the USSR Academy of Sciences.

Boris Ivanovich Oroyev--mechanic of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Vladimir Nikolayevich Kholin--lathe operator of the special design bureau of the Institute of Earth Physics imeni O.Yu. Shmidt of the USSR Academy of Sciences.

Viktor Ivanovich Khromov--lathe operator of the Institute of General Physics of the USSR Academy of Sciences.

Lev Mikhaylovich Shigin--lathe operator of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Ninel Mikhaylovna Alpatova--senior scientific associate of the Institute of Electrochemistry imeni A.N. Frumkin of the USSR Academy of Sciences.

Gagik Grigoryevich Arzumanyan--scientific secretary of the Social Sciences Section of the Presidium of the USSR Academy of Sciences.

Inga Pavlovna Arman--senior scientific associate of the Institute of Molecular Genetics of the USSR Academy of Sciences.



Lyudmila Pavlovna Arkhipova--senior scientific associate of the All-Union Institute of Scientific and Technical Information.

Vladimir Sergeyevich Bagotskiy--chief of a department of the Institute of Electrochemistry imeni A.N. Frumkin of the USSR Academy of Sciences.

Valentina Dmitriyevna Balukova--chief of a laboratory of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Eleonora Aleksandrovna Bashkir--junior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Ida Nikolayevna Blinova--senior engineer of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Galina Georgiyevna Bondareva--deputy chief of the Patent and Licensing Department of the USSR Academy of Sciences.

Yevgeniy Vladimirovich Bugrov--chief of a department of the Institute of World Economics and International Relations of the USSR Academy of Sciences.

Lev Vasilyevich Bulgak--scientific secretary of the Mineralogical Museum imeni A.Ye. Fersman of the USSR Academy of Sciences.

Anatoliy Petrovich Butuzov--mechanic of the Institute of Electrochemistry imeni A.N. Frumkin of the USSR Academy of Sciences.

Eduard Adamovich Varivonchik--chief of the special design bureau of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Nina Nikolayevna Vorobyeva--scientific secretary of the Institute of World Literature imeni A.M. Gorkiy of the USSR Academy of Sciences.

Anna Natanovna Gezentsvey--junior scientific associate of the Institute of Oceanology imeni P.P. Shirshov of the USSR Academy of Sciences.

Vladimir Ivanovich Gerasimov--senior scientific associate of the Institute of Scientific Information on the Social Sciences of the USSR Academy of Sciences.

Mikhail Petrovich Glazunov--chief of a department of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Yelena Sergeyevna Golubtsova--chief of a sector of the Institute of General History of the USSR Academy of Sciences.

Robert Veniaminovich Goldshteyn--senior scientific associate of the Institute of Problems of Mechanics of the USSR Academy of Sciences.

Viktor Aleksandrovich Denisov--chief of a section of the special design bureau of the Institute of Petrochemical Synthesis imeni A.V. Topchiyev of the USSR Academy of Sciences.

Aleksandr Maksimovich Dzyuba--junior scientific associate of the Main Botanical Garden of the USSR Academy of Sciences.

Larisa Grigoryevna Dikaya--senior scientific associate of the Institute of Psychology of the USSR Academy of Sciences.

Galina Ilinichna Yeganyan--assistant of the vice president of the USSR Academy of Sciences.

Nina Ivanovna Zabezhinskaya--scientific associate of the Institute of State and Law of the USSR Academy of Sciences.

Boris Mikhaylovich Zimakov--senior scientific associate of the Institute of Problems of the Complex Utilization Mineral Resources of the USSR Academy of Sciences.

Zbignev Vladislavovich Ivanovskiy--junior scientific associate of the Institute of Latin America of the USSR Academy of Sciences.

Yuriy Viktorovich Ilin--chief of a laboratory of the Institute of Molecular Biology of the USSR Academy of Sciences.

Valeriy Alekseyevich Irikov--chief of a sector of the Institute of Power Engineering Research.

Gennadiy Mikhaylovich Isakov--chief of the pilot works of the Institute of Applied Mathematics imeni M.V. Keldysh of the USSR Academy of Sciences.

Galina Romanovna Kalinina--senior scientific associate of the All-Union Institute of Scientific and Technical Information.

Lidiya Mitrofanovna Kalchenko--senior laboratory assistant of the Institute of General Physics of the USSR Academy of Sciences.

Aleksey Vladimirovich Kamernitskiy--chief of a laboratory of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Aleksandr Abramovich Kireyev--chief mechanic of the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsov of the USSR Academy of Sciences.

Igor Aleksandrovich Kiryenin--chief of a department of the special design bureau of the Institute of High Temperatures of the USSR Academy of Sciences.

Vladimir Robertovich Kler--senior scientific associate of the Institute of the Lithosphere of the USSR Academy of Sciences.

Andrey Lvovich Knipper--chief of a laboratory of the Geology Institute of the USSR Academy of Sciences.

Vyacheslav Ivanovich Kovalenko--chief of a laboratory of the Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry of the USSR Academy of Sciences.

Ivan Sergeyevich Kolobkov--lathe operator of the Central Design Bureau of Custom Instrument Making of the Scientific and Technical Association of the USSR Academy of Sciences.

Aston Antonovich Komar--chief of a laboratory of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Zinaida Mikhaylovna Korsakova--leader of a brigade of painters of Construction and Installation Administration No 10 of the Central Construction Administration of the USSR Academy of Sciences.

Mikhail Fedorovich Kosarev--senior scientific associate of the Institute of Archeology of the USSR Academy of Sciences.

Leonid Vladimirovich Kravchuk--chief of a laboratory of the Institute of Nuclear Research of the USSR Academy of Sciences.

Nelli Pavlovna Krasnikova--scientific secretary of the Institute of Petrochemical Synthesis imeni A.V. Topchiyev of the USSR Academy of Sciences.

Valentin Viktorovich Kurashev--scientific secretary of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Valentin Fedorovich Kutyev--senior scientific associate of the Institute of History of the USSR of the USSR Academy of Sciences.

Grigoriy Semenovich Kushnir--senior scientific associate of the Institute of Earth Physics imeni O.Yu. Shmidt of the USSR Academy of Sciences.

Albert Lvovich Lapidus--chief of a laboratory of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Tatyana Ivanovna Leonchik--chief engineer of the Institute of Space Research of the USSR Academy of Sciences.

Olga Konstantinovna Loginova--senior science editor of the Science Publishing House.

Vladimir Vladimirovich Lopatin--senior scientific associate of the Institute of the Russian Language of the USSR Academy of Sciences.

Vasiliy Nikolayevich Lykov--senior scientific associate of the Computational Mathematics Department of the USSR Academy of Sciences.

Lev Lvovich Lyubimov--chief of a department of the Institute of World Economics and International Relations of the USSR Academy of Sciences.

Andrey Vladimirovich Malinovskiy--junior scientific associate of the Institute of Plant Physiology imeni K.A. Timiryazev of the USSR Academy of Sciences.

Yuriy Borisovich Manteyfel--chief of a laboratory of the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsov of the USSR Academy of Sciences.

Vasiliy Kharitonovich Matyushenko--chief of a department of the Sector of Mechanics of Heterogeneous Media of the USSR Academy of Sciences.

Yevgeniy Nikolayevich Merkulov--chief of a shop of the pilot works of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Svetlana Sergeyevna Mikhaylova--senior scientific associate of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Nelya Vasilyevna Motroshilova--senior scientific associate of the Institute of Philosophy of the USSR Academy of Sciences.

Vladimir Ilich Neyman--scientific secretary of the Institute of Information Transmission Problems of the USSR Academy of Sciences.

Boris Mikhaylovich Ovchinnikov--senior scientific associate of the Institute of Nuclear Research of the USSR Academy of Sciences.

Yuliya Grigoryevna Ozemblovskaya--chief accountant of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Konstantin Yevgenyevich Petrukhin--junior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Nadezhda Nikolayevna Pshenichnova--acting chief of a sector of the Institute of the Russian Language of the USSR Academy of Sciences.

Natalya Mikhaylovna Rimashevskaya--chief of a department of the Central Institute of Economics and Mathematics of the USSR Academy of Sciences.

Feliks Ivanovich Ruzanov--chief of a laboratory of the Institute of Machine Science imeni A.A. Blagonravov of the USSR Academy of Sciences.

Igor Nikolayevich Ryabov--senior scientific associate of the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsov of the USSR Academy of Sciences.

Boris Georgiyevich Saltykov--chief of a department of the Central Institute of Economics and Mathematics of the USSR Academy of Sciences.

Viktor Mikhaylovich Semenov--operator of the compressor plants of the Institute of Problems of the Technology of Microelectronics and Ultrafine Materials of the USSR Academy of Sciences.

Timofey Mikhaylovich Sivakov--leader of a brigade of lathe operators of the special design bureau of the Institute of Crystallography imeni A.V. Shubnikov of the USSR Academy of Sciences.

Nodari Aleksandrovich Simoni--chief of a department of the Institute of Oriental Studies of the USSR Academy of Sciences.

Yelena Ivanovna Skirgaylo--chief of a department of the Natural Sciences Library of the USSR Academy of Sciences.

Viktor Nikolayevich Sokolskiy--chief of a sector of the Institute of History of the Natural Sciences and Technology of the USSR Academy of Sciences.

Boris Yakovlevich Spivakov--senior scientific associate of the Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy of the USSR Academy of Sciences.

Natalya Grigoryevna Sretenskaya--senior scientific associate of the Institute of Experimental Mineralogy of the USSR Academy of Sciences.

Aleksey Aleksandrovich Starobinskiy--senior scientific associate of the Institute of Theoretical Physics imeni L.D. Landau of the USSR Academy of Sciences.

Margarita Petrovna Stradomskaya--senior engineer of the Institute of Geography of the USSR Academy of Sciences.

Anatoliy Ivanovich Subochev--senior scientific associate of the Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy of the USSR Academy of Sciences.

Nina Stepanovna Tarasikova--senior nurse of the Uzkoye Sanatorium of the USSR Academy of Sciences.

Aleksandr Ivanovich Telezhkin--senior engineer of the All-Union Institute of Scientific and Technical Information.

Edkhryam Rakhimovich Tenishev--chief of a sector of the Institute of Linguistics of the USSR Academy of Sciences.

Lev Solomonovich Tolchinskiy--chief engineer of Installation U-25 of the Institute of High Temperatures of the USSR Academy of Sciences.

Yuriy Andreyevich Trapeznikov--deputy chief of a department of the Institute of High Temperatures of the USSR Academy of Sciences.

Andrey Borisovich Uryupin--senior scientific associate of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Iskra-Marina Aleksandrovna Usiyevich--chief of a sector of the Institute of Economics of the World Socialist System of the USSR Academy of Sciences.

Erlen Ilich Fedin--chief of a laboratory of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Andrey Yevgenyevich Khalizev--scientific secretary of the Institute of Molecular Genetics of the USSR Academy of Sciences.

Vladimir Rubenovich Khachaturov--chief of a department of the Computer Center of the USSR Academy of Sciences.

Valentina Pavlovna Kholodova--acting chief of a laboratory of the Institute of Plant Physiology imeni K.A. Timiryazev of the USSR Academy of Sciences.

Natalya Nikolayevna Chudinova--senior scientific associate of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Valentina Vladimirovna Chupeyeva--senior laboratory assistant of the Institute of Molecular Biology of the USSR Academy of Sciences.

Svetlana Aleksandrovna Sherlaimova--chief of a sector of the Institute of Slavic and Balkan Studies of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Iyudmila Valentinovna Bakhireva--senior scientific associate of the Institute of the Lithosphere of the USSR Academy of Sciences.

Yuriy Matveyevich Bayakovskiy--chief of a department of the Institute of Applied Mathematics imeni M.V. Keldysh of the USSR Academy of Sciences.

Stanislav Mikhaylovich Beloborodov--mechanic of the Institute of Experimental Mineralogy of the USSR Academy of Sciences.

Aleksandr Stepanovich Belov--chief of a group of the Institute of Nuclear Research of the USSR Academy of Sciences.

Lidiya Aleksandrovna Bogdanova--chief of a department of the Institute of Scientific Information on the Social Sciences of the USSR Academy of Sciences.

Yelena Filippovna Boldyreva--junior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Avgust Rafaelyevich Brun-Tsekhovoy--chief of the Production Planning Department of the Institute of Space Research of the USSR Academy of Sciences.

German Aleksandrovich Vlaskin--chief of a department of the Institute of Economics of the World Socialist System of the USSR Academy of Sciences.

Aleksandr Gabibovich Gabibov--junior scientific associate of the Institute of Molecular Biology of the USSR Academy of Sciences.

Aleksandr Vasilyevich Galkin--senior engineer of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Yevgeniya Yevgenyevna Gordeyeva--senior engineer of the Institute of Plant Physiology imeni K.A. Timiryazev of the USSR Academy of Sciences.

Aleksandr Yefimovich Gorodetskiy--senior scientific associate of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Antonina Dmitriyevna Grishina--senior scientific associate of the Institute of Electrochemistry imeni A.N. Frumkin of the USSR Academy of Sciences.

Mikhail Aleksandrovich Gubin--senior scientific associate of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Aleksandr Grigoryevich Gusar--senior scientific associate of the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsov of the USSR Academy of Sciences.

Gennadiy Georgiyevich Dementyev--mechanic of the Institute of Atmospheric Physics of the USSR Academy of Sciences.

Aleksandr Borisovich Dergunov--senior scientific associate of the Geology Institute of the USSR Academy of Sciences.

Tamara Borisovna Dmitriyeva--senior scientific associate of the Institute of World Literature imeni A.M. Gorkiy of the USSR Academy of Sciences.

Anatoliy Iaktionovich Zhuravlev--senior scientific associate of the Institute of Psychology of the USSR Academy of Sciences.

Anatoliy Nikolayevich Zelenskiy--chief of a group of the Institute of Nuclear Research of the USSR Academy of Sciences.

Lidiya Andreyevna Zelentsova--senior laboratory assistant of the Institute of the International Workers' Movement of the USSR Academy of Sciences.

Ninel Nikolayevna Ivanova--senior scientific associate of the Institute of Plant Physiology imeni K.A. Timiryazev of the USSR Academy of Sciences.

Lev Alekseyevich Ipatov--deputy chief of a department of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Aleksandra Bentsionovna Isayeva--junior scientific associate of the Institute of Oceanology imeni P.P. Shirshov of the USSR Academy of Sciences.

Aleksey Aleksandrovich Kalachev--junior scientific associate of the Institute of Petrochemical Synthesis imeni A.V. Topchiyev of the USSR Academy of Sciences.

Valeriy Nikolayevich Kalinin--senior scientific associate of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Nina Mikhaylovna Kalyuzhnaya--senior scientific associate of the Institute of Oriental Studies of the USSR Academy of Sciences.

Sergey Sergeyevich Kamynin--senior scientific associate of the Institute of Applied Mathematics imeni M.V. Keldysh of the USSR Academy of Sciences.

Vadim Lvovich Karpov--junior scientific associate of the Institute of Molecular Biology of the USSR Academy of Sciences.

Yevgeniya Nikolayevna Kiseleva--junior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Raisa Alekseyevna Klenova--junior scientific associate of the Institute of History of the USSR of the USSR Academy of Sciences.

Aleksandr Stepanovich Kobayakov--chief of the assembly works of Installation U-25 of the Institute of High Temperatures of the USSR Academy of Sciences.

Vladimir Aleksandrovich Kovalenker--senior scientific associate of the Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry of the USSR Academy of Sciences.

Yuriy Petrovich Kovalenko--chief of a sector of the Institute of Sociological Research of the USSR Academy of Sciences.

Nikolay Pavlovich Kolyshkov--electrician of the Repair and Construction Administration of the Administration of Affairs of the USSR Academy of Sciences.

Yevgeniy Aleksandrovich Konovalov--chief of a sector of the Institute of the Far East of the USSR Academy of Sciences.

Galina Mikhaylovna Koryagina--senior scientific associate of the Institute of High Temperatures of the USSR Academy of Sciences.

Nina Aleksandrovna Kochetova--chief engineer of the Central Institute of Economics and Mathematics of the USSR Academy of Sciences.

Lyudmila Kirillovna Kuvanova--senior scientific associate of the Institute of World Literature imeni A.M. Gorkiy of the USSR Academy of Sciences.

Andrey Gennadiyevich Kulikovskiy--senior scientific associate of the Mathematics Institute imeni V.A. Steklov of the USSR Academy of Sciences.



Sergey Stepanovich Kurochkin--junior scientific associate of the Institute of Problems of the Complex Utilization of Mineral Resources of the USSR Academy of Sciences.

Aleksandr Borisovich Legostayev--lathe operator of the pilot works of the Institute of Nuclear Research of the USSR Academy of Sciences.

Nina Konstantinovna Lisitsyna--junior scientific associate of the Institute of Archeology of the USSR Academy of Sciences.

Viktor Petrovich Litvinov--senior scientific associate of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Svetlana Vladimirovna Lomakina--senior scientific associate of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Viktor Vasilyevich Lomeyko--mechanic of the Institute of Solid-State Physics of the USSR Academy of Sciences.

Viktor Vasilyevich Mazayev--mechanic of the Institute of Molecular Genetics of the USSR Academy of Sciences.

Nikolay Yakovlevich Mareyev--mechanic of the Institute of Crystallography imeni A.V. Shubnikov of the USSR Academy of Sciences.

Anna Ivanovna Markova--foreman of mechanical milking of the scientific experimental farm of the Main Botanical Garden of the USSR Academy of Sciences.

Vyacheslav Andreyevich Maslennikov--senior scientific associate of the Institute of State and Law of the USSR Academy of Sciences.

Tamara Lvovna Mozheyko--electrophotographer of the printing subdivision of the Institute of Scientific Information on the Social Sciences of the USSR Academy of Sciences.

Yevgeniya Leonidovna Motenkova--chief of a department of the Natural Sciences Library of the USSR Academy of Sciences.

Vladimir Vasilyevich Nazarov--chief of a pilot experimental works of the Institute of Machine Science imeni A.A. Blagonravov of the USSR Academy of Sciences.

Valentina Fedorovna Nenakhova--senior scientific associate of the Institute of the Lithosphere of the USSR Academy of Sciences.

Valentina Vladimirovna Nikolaychik--junior scientific associate of the Institute of Earth Physics imeni O.Yu. Shmidt of the USSR Academy of Sciences.

Iraida Vasilyevna Novikova--chief accountant of the Central Office for the Dissemination of Literature Published by the Science Publishing House.

Tatyana Semenovna Novikova--senior scientific associate of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Lidiya Pavlovna Novoselova--chief of a sector of the Institute of Water Problems of the USSR Academy of Sciences.

Ivan Andreyevich Oreshkin--senior scientific associate of the Institute of Petrochemical Synthesis imeni A.V. Topchiyev of the USSR Academy of Sciences.

Oleg Rafailovich Osipov--senior scientific associate of the Institute of Electrochemistry imeni A.N. Frumkin of the USSR Academy of Sciences.

Anatoliy Georgiyevich Padalko--senior scientific associate of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Aleksandr Georgiyevich Petrenko--junior scientific associate of the Institute of Bioorganic Chemistry imeni M.M. Shemyakin of the USSR Academy of Sciences.

Anna Andreyevna Petrenko--senior inspector of the Philosophy and Law Department of the USSR Academy of Sciences.

Dmitriy Vasilyevich Petrov--chief of a department of the Institute of the Far East of the USSR Academy of Sciences.

Igor Artemyevich Petrov--chief engineer of the Computer Center of the USSR Academy of Sciences.

Svetlana Petrovna Pozharskaya--senior scientific associate of the Institute of General History of the USSR Academy of Sciences.

Aleksandr Viktorovich Prosuntsov--instrument control man of the autoclave workshop of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Moisey Genrikhovich Rappoport--chief of a laboratory of the Central Institute of Economics and Mathematics of the USSR Academy of Sciences.

Vera Sergeyevna Rastorguyeva--chief of a sector of the Institute of Linguistics of the USSR Academy of Sciences.

Lidiya Vasilyevna Rykhlova--senior scientific associate of the Astronomy Council of the USSR Academy of Sciences.

Valentina Platonovna Sakharova--senior scientific associate of the All-Union Institute of Scientific and Technical Information.

Lidiya Sergeyevna Sbytova--chief of a department of the Institute of Economics of the USSR Academy of Sciences.

Iyudmila Vasilyevna Sedelnikova--chief of a group of the All-Union Scientific Research Institute of Systems Research.

Dzhavanshir Gasan ogly Seidov--chief of a laboratory of the Institute of Oceanology imeni P.P. Shirshov of the USSR Academy of Sciences.

Boris Ivanovich Sinenkov--milling machine operator of the special design bureau of the All-Union Institute of Scientific and Technical Information.

Malva Aleksandrovna Smirnova--chief curator of the Mineralogical Museum imeni A.Ye. Fersman of the USSR Academy of Sciences.

Georgiy Pavlovich Sobolev--chief electronics engineer of the Institute of Oceanology imeni P.P. Shirshov of the USSR Academy of Sciences.

Arseniy Timofeyevich Sokolov--chief engineer of the Institute of Solid-State Physics of the USSR Academy of Sciences.

Yuriy Petrovich Sorokin--deputy chief of the Accounting, Reporting, and Interdepartmental Control Administration of the USSR Academy of Sciences.

Aleksey Dmitriyevich Starchenkov--glass blower of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Avgusta Konstantinovna Strizhkova--scientific secretary for international scientific relations of the Institute of Slavic and Balkan Studies of the USSR Academy of Sciences.

Tatyana Alekseyevna Sumnikova--senior scientific associate of the Institute of the Russian Language of the USSR Academy of Sciences.

Aleksandr Sergeyevich Surov--electrician of the pilot works of the Institute of Nuclear Research of the USSR Academy of Sciences.

Serafima Vladimirovna Suslova--foreman of a radioelectronic shop of the special design bureau of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Albert Nikolayevich Sukhanovskiy--chief engineer of the Physics Institute imeni P.N. Lebedev of the USSR Academy of Sciences.

Raisa Ivanovna Timakova--chief of the Production Planning Department of the Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy of the USSR Academy of Sciences.

Marina Nikolayevna Tikhomirova--senior scientific associate of the All-Union Institute of Scientific and Technical Information.

Dmitriy Georgiyevich Tomashevskiy--chief researcher of the Institute of World Economics and International Relations of the USSR Academy of Sciences.

Yelena Petrovna Turpayeva--senior scientific associate of the Institute of Oceanology imeni P.P. Shirshov of the USSR Academy of Sciences.

Anton Pavlovich Favorskiy--chief of a sector of the Institute of Applied Mathematics imeni M.V. Keldysh of the USSR Academy of Sciences.

Vitaliy Fedorovich Feoktistov--chief of a sector of the Institute of the Far East of the USSR Academy of Sciences.

Nina Pavlovna Firsova--manager of a group of the All-Union State Institute of the Planning of Scientific Research Institutes and Laboratories of the USSR Academy of Sciences.

Vladimir Grigoryevich Khlebodarov--junior scientific associate of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Boris Andreyevich Khryakov--fitter of the Institute of General Physics of the USSR Academy of Sciences.

Aslan Yusupovich Tsivadze--chief of a laboratory of the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the USSR Academy of Sciences.

Vladimir Afanasyevich Tsyryapkin--senior scientific associate of the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov of the USSR Academy of Sciences.

Olga Fedorovna Chernova--senior scientific associate of the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsov of the USSR Academy of Sciences.

Nikolay Vladimirovich Churayev--chief of a laboratory of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Yuriy Andreyevich Shalnov--milling machine operator of the pilot works of the Institute of Physical Chemistry of the USSR Academy of Sciences.

Yevgeniy Abramovich Shapiro--senior scientific associate of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Vsevolod Pavlovich Shidlovskiy--senior scientific associate of the Computer Center of the USSR Academy of Sciences.

Musa Umyarovich Yunisov--electrophotographer of the Institute of Ethnography imeni N.N. Miklukho-Maklay of the USSR Academy of Sciences.

Igor Pavlovich Yakovlev--senior scientific associate of the Institute of Organic Chemistry imeni N.D. Zelinskiy of the USSR Academy of Sciences.

Yevgeniya Sergeyevna Yakovleva--chief of a department of the Institute of General and Inorganic Chemical imeni N.S. Kurnakov of the USSR Academy of Sciences.

Nina Mikhaylovna Yarotskaya--senior inspector for basic activity of the History Department of the USSR Academy of Sciences.

Moscow Oblast

The Order of Labor Red Banner

Galym Abilsiirov--director of the Scientific Research Center for Technological Lasers of the USSR Academy of Sciences.

Vladimir Andreyevich Golubev--director of the Pushchino Plant of Construction Items of the Central Construction Administration of the USSR Academy of Sciences.

Valeriy Konstantinovich Yeroshin--deputy director of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

The Order of Friendship of Peoples

Vasiliy Konstantinovich Akimenko--chief of a laboratory of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

Leonid Grigoryevich Bilyar--deputy director of the Scientific Center of Biological Research of the USSR Academy of Sciences.

Stanislav Vladimirovich Nikonov--senior scientific associate of the Institute of Protein of the USSR Academy of Sciences.

The Badge of Honor

Anatoliy Timofeyevich Gudkov--senior scientific associate of the Institute of Protein of the USSR Academy of Sciences.

Vladimir Aleksandrovich Yezhov--chief of a department of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

Mikhail Semenovitch Zhdanov--chief of a department of the Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation of the USSR Academy of Sciences.

Yefim Solomonovich Itskevich--chief of a laboratory of the Institute of High Pressure Physics imeni L.F. Vereshchagin of the USSR Academy of Sciences.

Kira Aleksandrovna Koshcheyenko--senior scientific associate of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

Valeriy Borisovich Kravchenko--chief of a laboratory of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Yuriy Vladimirovich Kushnerevskiy--chief of a laboratory of the Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation of the USSR Academy of Sciences.

Vladimir Grigoryevich Nizyev--chief of a department of the Scientific Research Center for Technological Lasers of the USSR Academy of Sciences.

Roman Ivanovich Personov--chief of a department of the Institute of Spectroscopy of the USSR Academy of Sciences.

Petr Leonidovich Privalov--chief of a laboratory of the Institute of Protein of the USSR Academy of Sciences.

Lev Nikolayevich Samoznayev--senior scientific associate of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Nikolay Ivanovich Trofimov--optician of the pilot works of the Institute of Spectroscopy of the USSR Academy of Sciences.

Tatyana Vasilyevna Finogenova--senior scientific associate of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

The Order of Labor Glory 2d Degree

Yuriy Leonidovich Malashevskiy--printer of the production and publishing combine of the All-Union Institute of Scientific and Technical Information.

The Order of Labor Glory 3d Degree

Lyubov Aleksandrovna Klimova--typesetter of the production and publishing combine of the All-Union Institute of Scientific and Technical Information.

Nikolay Semenovitch Kondrashov--mechanic of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

Boris Semenovitch Sizov--lathe and drill operator of the Special Design Bureau of Biological Instrument Making of the Scientific and Technical Association of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Lyudmila Anatolyevna Anisimova--junior scientific associate of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

Kirill Makarovitch Zlotnikov--senior scientific associate of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

Vyacheslav Mikhaylovich Markelov--senior engineer of the pilot works of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Valentina Karpovna Mikhaylova--senior laboratory assistant of the Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation of the USSR Academy of Sciences.

Lev Pavlovich Ovchinnikov--chief of a laboratory of the Institute of Protein of the USSR Academy of Sciences.

Lev Grigoryevich Khvostantsev--chief of a department of the Institute of High Pressure Physics imeni L.F. Vereshchagin of the USSR Academy of Sciences.

Aleksandr Viktorovich Shevyakov--mechanic of the pilot works of the special design bureau of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Anna Pavlovna Yakushina--operator of a unit of the binding shop of the production and publishing combine of the All-Union Institute of Scientific and Technical Information.

The Medal "For Labor Distinction"

Mikhail Utelevich Arinbasarov--junior scientific associate of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

Yelena Rafaelevna Arutyunyan--engineer of the Institute of Protein of the USSR Academy of Sciences.

Ivan Aleksandrovich Yekimovskikh--chief of a sector of the special design bureau of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Vladimir Grigoryevich Konovalov--lathe operator of the pilot works of the Scientific Research Center of Technological Lasers of the USSR Academy of Sciences.

Valentina Vasilyevna Litvishkova--chief of the Department of Labor Safety Procedures and Labor Safety Techniques of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Yuriy Pavlovich Lomonosov--senior foreman of the mockup and machine workshops of the Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation of the USSR Academy of Sciences.

Tatyana Semenovna Svintsova--typesetter of the typesetting shop of the production and publishing combine of the All-Union Institute of Scientific and Technical Information.

Yuriy Aleksandrovich Trotsenko--chief of a laboratory of the Institute of Biochemistry and Physiology of Microorganisms of the USSR Academy of Sciences.

Murmansk Oblast

The Order of Labor Red Banner

Oleg Mikhaylovich Raspopov--director of the Polar Geophysics Institute of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

### The Order of Friendship of Peoples

Fausten Aleksandrovich Ritter--chief of a group of the Mining Institute of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

### The Badge of Honor

Vasiliy Stepanovich Glibin--foreman of a pilot works of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

Viktor Ivanovich Zakharov--chief of a laboratory of the Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

Gennadiy Grigoryevich Matishov--director of the Murmansk Marine Biology Institute of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

Zhanna Filippovna Onokhina--junior scientific associate of the Polar Alpine Botanical Garden Institute of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

### The Medal "For Labor Prowess"

Valentina Alekseyevna Ivanova--senior scientific associate of the Mining Institute of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

Vladimir Alekseyevich Masloboyev--deputy director of the Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

### The Medal "For Labor Distinction"

Anatoliy Nikolayevich Vinogradov--chief of a laboratory of the Geology Institute of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

Aleksandr Shlemovich Gershenkop--acting chief of a laboratory of the Mining Institute of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

Mariya Ivanovna Merkusheva--painter of the repair and construction section of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.

Nikolay Vladimirovich Sharov--chief of a laboratory of the Geology Institute of the Kola Affiliate imeni S.M. Kirov of the USSR Academy of Sciences.



## Novosibirsk Oblast

### The Order of Lenin

Andrey Alekseyevich Trofimuk--director of the Institute of Geology and Geophysics imeni 60-letiya Soyuza SSR of the Siberian Department of the USSR Academy of Sciences.

### The Order of the October Revolution

Dmitriy Georgiyevich Knorre--director of the Novosibirsk Institute of Bioorganic Chemistry of the Siberian Department of the USSR Academy of Sciences.

### The Order of Labor Red Banner

Viktor Georgiyevich Dulov--director of the Institute of Theoretical and Applied Mechanics of the Siberian Department of the USSR Academy of Sciences.

Kirill Ilich Zamarayev--director of the Institute of Catalysis of the Siberian Department of the USSR Academy of Science.

Voldemar Petrovich Koronkevich--chief of a laboratory of the Institute of Automation and Electrometry of the Siberian Department of the USSR Academy of Sciences.

Vladimir Petrovich Mamayev--director of the Novosibirsk Institute of Organic Chemistry of the Siberian Department of the USSR Academy of Sciences.

Asan Dabsovich Taymanov--senior scientific associate of the Institute of Mathematics of the Siberian Department of the USSR Academy of Sciences.

Vladimir Mikhaylovich Titov--deputy director of the Institute of Hydrodynamics imeni M.A. Lavrentyev of the Siberian Department of the USSR Academy of Sciences.

### The Order of Friendship of Peoples

Stanislav Nikolayevich Antontsev--chief of a laboratory of the Institute of Hydrodynamics imeni M.A. Lavrentyev of the Siberian Department of the USSR Academy of Sciences.

Vladimir Yegorovich Balakin--chief of a laboratory of the Institute of Nuclear Physics of the Siberian Department of the USSR Academy of Sciences.

Mikhail Fedorovich Zhukov--deputy director of the Institute of Thermal Physics of the Siberian Department of the USSR Academy of Sciences.

Yuriy Dmitriyevich Tsvetkov--chief scientific secretary of the Siberian Department of the USSR Academy of Sciences.

## The Badge of Honor

Lyudmila Lvovna Vasilyeva--senior scientific associate of the Institute of Semiconductor Physics of the Siberian Department of the USSR Academy of Sciences.

Leonid Mikhaylovich Goryushkin--chief of a sector of the Institute of History, Philology, and Philosophy of the Siberian Department of the USSR Academy of Sciences.

Aleksandr Grigoryevich Granberg--director of the Institute of Economics and the Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences.

Andrey Andreyevich Deribas--chief of the Special Design Bureau of Hydraulic Pulsed Equipment of the Siberian Department of the USSR Academy of Sciences.

Valeriy Kuzmich Duplyakin--chief of a laboratory of the Institute of Catalysis of the Siberian Department of the USSR Academy of Sciences.

Yuriy Petrovich Zuykov--chief of the Administration of the Organization of Scientific Research and deputy chief scientific secretary of the Siberian Department of the USSR Academy of Sciences.

Roman Viktorovich Kovalev--director of the Institute of Soil Science and Agrochemistry of the Siberian Department of the USSR Academy of Sciences.

Igor Yuryevich Koropachinskiy--director of the Central Siberian Botanical Garden of the Siberian Department of the USSR Academy of Sciences.

Fedor Andreyevich Kuznetsov--director of the Institute of Inorganic Chemistry of the Siberian Department of the USSR Academy of Sciences.

Nikolay Zakharovich Lyakhov--deputy director of the Institute of Solid-State Chemistry and the Processing of Mineral Raw Materials of the Siberian Department of the USSR Academy of Sciences.

Gennadiy Alekseyevich Mikhaylov--chief of a laboratory of the Computer Center of the Siberian Department of the USSR Academy of Sciences.

Valeriy Pavlovich Pyatkin--chief of a laboratory of the Computer Center of the Siberian Department of the USSR Academy of Sciences.

Nikolay Pavlovich Ryashentsev--acting chief of the Special Design Bureau of Applied Geophysics of the Siberian Department of the USSR Academy of Sciences.

Lyudmila Nikolayevna Trut--chief of a laboratory of the Institute of Cytology and Genetics of the Siberian Department of the USSR Academy of Sciences.

Innokentiy Safyanovich Chichinin--chief of the Tomsk Department of the Institute of Geology and Geophysics imeni 60-letiya Soyuzu SSR of the Siberian Department of the USSR Academy of Sciences.

Yuriy Vasilyevich Chuguy--senior scientific associate of the Institute of Automation and Electrometry of the Siberian Department of the USSR Academy of Sciences.

Vissarion Aleksandrovich Shalaurov--chief of a laboratory of the Institute of Mining of the Siberian Department of the USSR Academy of Sciences.

The Order of Labor Glory 2d Degree

Aleksandr Antonovich Sokolov--grinder of a pilot plant of the Siberian Department of the USSR Academy of Sciences.

Valeriy Petrovich Urvantsev--battery man of the Central Garage of the Siberian Department of the USSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Viktor Ilich Garusov--driver of a vehicle of the Central Garage of the Siberian Department of the USSR Academy of Sciences.

Anatoliy Nikolayevich Kolomeyev--milling machine operator of a pilot plant of the Siberian Department of the USSR Academy of Sciences.

Galina Vladimirovna Samsonova--printer of the 4th Printing Plant of the Science Publishing House.

Leonid Trofimovich Titov--milling machine operator of the Institute of Nuclear Physics of the Siberian Department of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Valentina Danilovna Alekseyeva--installer of radio equipment and instruments of a pilot plant of the Siberian Department of the USSR Academy of Sciences.

Tatyana Ivanovna Veselovskaya--chief of a department of the Main Production Computer Center of the Siberian Department of the USSR Academy of Sciences.

Yuriy Leonidovich Vishnevskiy--chief of a laboratory of the Computer Center of the Siberian Department of the USSR Academy of Sciences.

Mariya Nikolayevna Dolgova--chief of Polyclinic Department No 2 of the Central Clinical Hospital of the Siberian Department of the USSR Academy of Sciences.

Vadim Georgiyevich Dudnikov--senior scientific associate of the Institute of Nuclear Physics of the Siberian Department of the USSR Academy of Sciences.

Sergey Petrovich Ignatov--chief accountant of the Administration of Workers' Supply of the Sibakademstroy Construction Administration imeni 50-letiya Soyuza SSR.

Tatyana Viktorovna Ieshina--senior scientific associate of the Institute of Chemical Kinetics and Combustion of the Siberian Department of the USSR Academy of Sciences.

Valeriy Nikolayevich Okunishnikov--chief of a sector of the Special Design Bureau of Scientific Instrument Making of the Siberian Department of the USSR Academy of Sciences.

Liya Pavlovna Pavlova--deputy director of the State Public Scientific and Technical Library of the Siberian Department of the USSR Academy of Sciences.

Viktor Grigoryevich Pankin--chief of a department of the Special Design and Technological Bureau of Special Electronics and Analytical Instrument Making of the Siberian Department of the USSR Academy of Sciences.

Galina Ivanovna Pushkareva--manager of a group of the Institute of Mining of the Siberian Department of the USSR Academy of Sciences.

Yuriy Solomonovich Ravkin--chief of a laboratory of the Biology Institute of the Siberian Department of the USSR Academy of Sciences.

Sergey Ivanovich Serednyakov--senior scientific associate of the Institute of Nuclear Physics of the Siberian Department of the USSR Academy of Sciences.

Eduard Vladimirovich Skubnevskiy--deputy director of the Institute of Semiconductor Physics of the Siberian Department of the USSR Academy of Sciences.

Viktor Nikolayevich Sharapov--chief of a laboratory of the Institute of Geology and Geophysics imeni 60-letiya Souyza SSR of the Siberian Department of the USSR Academy of Sciences.

Vasiliy Maksimovich Shepelev--senior scientific associate of the Institute of Cytology and Genetics of the Siberian Department of the USSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Nikolay Nikolayevich Belov--electrician of the Administration of Electrical and Heat Networks of the Siberian Department of the USSR Academy of Sciences.

Lidiya Aleksandrovna Borisova--senior scientific associate of the Institute of Inorganic Chemistry of the Siberian Department of the USSR Academy of Sciences.

Mariya Ivanovna Virchenko--chief of a laboratory of the Institute of Mathematics of the Siberian Department of the USSR Academy of Sciences.

Vladimir Aleksandrovich Zakharov--chief of a laboratory of the Institute of Catalysis of the Siberian Department of the USSR Academy of Sciences.

Aleksandr Nikolayevich Kasperovich--chief of a laboratory of the Institute of Automation and Electrometry of the Siberian Department of the USSR Academy of Sciences.

Galina Alekseyevna Kolotova--chief inspector for basic activity of the Administration of the Organization of Scientific Research of the staff of the Presidium of the Siberian Department of the USSR Academy of Sciences.

Nikolay Konstantinovich Kuksanov--senior scientific associate of the Institute of Nuclear Physics of the Siberian Department of the USSR Academy of Sciences.

Mark Markovich Kuleshov--director of the hotel of the Siberian Department of the USSR Academy of Sciences.

Valentina Filippovich Kulikova--chief of a laboratory of the Novosibirsk Institute of Bioorganic Chemistry of the Siberian Department of the USSR Academy of Sciences.

Valentina Konstantinovna Markova--foreman of mechanical milking of an experimental farm of the Siberian Department of the USSR Academy of Sciences.

Lyudmila Fedorovna Martynenko--junior scientific associate of the Institute of Thermal Physics of the Siberian Department of the USSR Academy of Sciences.

Vladimir Nikolayevich Novikov--laboratory assistant of the Institute of Nuclear Physics of the Siberian Department of the USSR Academy of Sciences.

Valentina Alekseyevna Pentegova--chief of a laboratory of the Novosibirsk Institute of Organic Chemistry of the Siberian Department of the USSR Academy of Sciences.

Galina Aleksandrovna Popova--chief of the Economic Planning Department of the Administration of Capital Construction of the Siberian Department of the USSR Academy of Sciences.

Gennadiy Alekseyevich Sapozhnikov--senior scientific associate of the Institute of Theoretical and Applied Mechanics of the Siberian Department of the USSR Academy of Sciences.

Sergey Grigoryevich Sayapin--chief of computers of the Computer Center of the Siberian Department of the USSR Academy of Sciences.

Lyudmila Grigoryevna Simonova--senior scientific associate of the Institute of Catalysis of the Siberian Department of the USSR Academy of Sciences.

Zoya Maksimovna Sineva--chief of Children's Nursery No 95 of the Siberian Department of the USSR Academy of Sciences.

Vasiliy Dmitriyevich Smirnov--senior scientific associate of the Institute of Economics and the Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences.

Anatoliy Aleksandrovich Tkachenko--chief of a laboratory of the Special Design and Technological Bureau of Single Crystals of the Siberian Department of the USSR Academy of Sciences.

Anna Fedorovna Khlonova--senior scientific associate of the Institute of Geology and Geophysics imeni 60-letiya Soyuza SSR of the Siberian Department of the USSR Academy of Sciences.

Yevgeniy Ivanovich Cherepov--chief of a laboratory of the Institute of Semiconductor Physics of the Siberian Department of the USSR Academy of Sciences.

Igor Valentinovich Yakovlev--scientific secretary of the Institute of Hydrodynamics imeni M.A. Lavrentyev of the Siberian Department of the USSR Academy of Sciences.

Perm Oblast

The Medal "For Labor Prowess"

Valeriy Pavlovich Matveyenko--scientific secretary of the Institute of Continuum Mechanics of the Ural Scientific Center of the USSR Academy of Sciences.

Saratov Oblast

The Medal "For Labor Distinction"

Nikolay Ivanovich Sinitsyn--chief of a laboratory of the Saratov Affiliate of the Institute of Radio Engineering and Electronics of the USSR Academy of Sciences.

Sakhalin Oblast

The Badge of Honor

Boris Nikolayevich Piskunov--senior scientific associate of the Institute of Marine Geology and Geophysics of the Far Eastern Scientific Center of the USSR Academy of Sciences.

Sverdlovsk Oblast

The Order of Labor Red Banner

Nikolay Grigoryevich Ilyushchenko--chief of a laboratory of the Institute of Electrochemistry of the Ural Scientific Center of the USSR Academy of Sciences.

Leopold Igorevich Leontyev--deputy director of the Institute of Metallurgy of the Ural Scientific Center of the USSR Academy of Sciences.

#### The Order of Friendship of Peoples

Yuriy Galiulovich Zaynulin--senior scientific associate of the Institute of Chemistry of the Ural Scientific Center of the USSR Academy of Sciences.

Vadim Mikhaylovich Schastlivtsev--chief of a laboratory of the Institute of Metal Physics of the Ural Scientific Center of the USSR Academy of Sciences.

#### The Badge of Honor

Nikolay Nikolayevich Danilov--chief of a laboratory of the Institute of Plant and Animal Ecology of the Ural Scientific Center of the USSR Academy of Sciences.

Margarita Mikhaylovna Kirillova--chief of a laboratory of the Institute of Metal Physics of the Ural Scientific Center of the USSR Academy of Sciences.

Vladislav Dmitriyevich Lyubimov--senior scientific associate of the Institute of Chemistry of the Ural Scientific Center of the USSR Academy of Sciences.

Mikhail Porfiryevich Sveshnikov--deputy chief scientific secretary of the Presidium of the Ural Scientific Center of the USSR Academy of Sciences.

Oleg Vladimirovich Tyutkov--deputy director of the Institute of Economics of the Ural Scientific Center of the USSR Academy of Sciences.

Nikolay Ivanovich Chernykh--deputy director of the Institute of Mathematics and Mechanics of the Ural Scientific Center of the USSR Academy of Sciences.

Boris Ivanovich Chuvashov--chief of a laboratory of the Institute of Geology and Geochemistry imeni Academician A.N. Zavaritskiy of the Ural Scientific Center of the USSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Vladimir Aleksandrovich Grekov--mechanic of the experimental workshops of the Ural Scientific Center of the USSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Nina Ivanovna Korobova--driver of a vehicle of the garage of the Ural Scientific Center of the USSR Academy of Sciences.

Pavel Alekseyevich Pavlov--chief of a laboratory of the Department of Physical Technical Problems of Power Engineering of the Ural Scientific Center of the USSR Academy of Sciences.

Anatoliy Petrovich Tankeyev--senior scientific associate of the Institute of Metal Physics of the Ural Scientific Center of the USSR Academy of Sciences.

Valentina Petrovna Tostanovskaya--chief of the library of the Institute of Mathematics and Mechanics of the Ural Scientific Center of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Valeriy Aleksandrovich Gorbachev--senior scientific associate of the Institute of Metallurgy of the Ural Scientific Center of the USSR Academy of Sciences.

Inga Vladimirovna Yemelyanova--senior scientific associate of the Institute of Chemistry of the Ural Scientific Center of the USSR Academy of Sciences.

Kirill Svyatoslavovich Ivanov--junior scientific associate of the Institute of Geology and Geochemistry imeni Academician A.N. Zavaritskiy of the Ural Scientific Center of the USSR Academy of Sciences.

Viktor Pavlovich Krasnov--senior scientific associate of the Institute of Chemistry of the Ural Scientific Center of the USSR Academy of Sciences.

Natalya Adolfovna Tereshchenko--junior scientific associate of the Institute of Metal Physics of the Ural Scientific Center of the USSR Academy of Sciences.

Irina Viktorovna Frishberg--chief of a laboratory of the Institute of Metallurgy of the Ural Scientific Center of the USSR Academy of Sciences.

Natalya Ivanovna Shvyrkova--senior laboratory assistant of the Institute of Economics of the Ural Scientific Center of the USSR Academy of Sciences.

Margarita Vasilyevna Yakovleva--tower crane operator of the Construction and Installation Administration of the Ural Scientific Center of the USSR Academy of Sciences.

Tomsk Oblast

The Order of Labor Red Banner

Viktor Yevgenyevich Panin--director of the Institute of Strength Physics and Material Science of the Siberian Department of the USSR Academy of Sciences.

The Order of Friendship of Peoples

Boris Mikhaylovich Kovalchuk--chief of a department of the Institute of High Current Electronics of the Siberian Department of the USSR Academy of Sciences.

The Badge of Honor

Igor Eduardovich Naats--chief of a laboratory of the Institute of Atmospheric Optics of the Siberian Department of the USSR Academy of Sciences.



Nikolay Yegorovich Yakovlev--chief of a department of the Institute of Atmospheric Optics of the Siberian Department of the USSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Vladimir Afanasyevich Belokonev--foreman of a shop of a pilot works of the Optika Special Design Bureau of Scientific Instrument Making of the Siberian Department of the USSR Academy of Sciences.

The Medal "For Labor Prowess"

Vladimir Aleksandrovich Kuvshinov--senior scientific associate of the Institute of Petroleum Chemistry of the Siberian Department of the USSR Academy of Sciences.

Vladimir Vasilyevich Shchemerov--chief of a combine of municipal service enterprises of the Tomsk Affiliate of the Siberian Department of the USSR Academy of Sciences.

The Medal "For Labor Distinction"

Yuriy Filimonovich Arshinov--senior scientific associate of the Institute of Atmospheric Optics of the Siberian Department of the USSR Academy of Sciences.

Aleksandr Alekseyevich Tikhomirov--chief of a laboratory of the Optika Special Design Bureau of Scientific Instrument Making of the Siberian Department of the USSR Academy of Sciences.

Tyumen Oblast

The Badge of Honor

Vladimir Pavlovich Melnikov--director of the Institute of Problems of the Development of the North of the Siberian Department of the USSR Academy of Sciences.

Chelyabinsk Oblast

The Medal "For Labor Prowess"

Petr Mikhaylovich Valizer--scientific secretary of the Ilmenskiy State Preserve imeni V.I. Lenin of the Ural Scientific Center of the USSR Academy of Sciences.

Chita Oblast

The Medal "For Labor Distinction"

Yuriy Fedorovich Pogrebnyak--chief of a laboratory of the Chita Institute of Natural Resources of the Siberian Department of the USSR Academy of Sciences.

For the Ukrainian SSR

Dnepropetrovsk Oblast

The Order of Labor Red Banner

Vladimir Antonovich Zadontsev--deputy director of the Institute of Technical Mechanics of the Ukrainian SSR Academy of Sciences.

The Badge of Honor

Yuriy Vasilyevich Demin--chief of a department of the Institute of Technical Mechanics of the Ukrainian SSR Academy of Sciences.

Vladimir Yefimovich Zabigaylo--chief of a department of the Institute of Geotechnical Mechanics of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Ivan Karpovich Manko--chief of a department of a special design and technological bureau of the Institute of Technical Mechanics of the Ukrainian SSR Academy of Sciences.

Vladimir Petrovich Nadutyy--chief project designer of a special design and technological bureau of the Institute of Geotechnical Mechanics of the Ukrainian SSR Academy of Sciences.

Leonid Dmitriyevich Shmatovskiy--senior scientific associate of the Institute of Geotechnical Mechanics of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Lyudmila Georgiyevna Kerekilitsa--senior scientific associate of the Institute of Geotechnical Mechanics of the Ukrainian SSR Academy of Sciences.

Sergey Fedorovich Redko--senior scientific associate of the Institute of Technical Mechanics of the Ukrainian SSR Academy of Sciences.

Donetsk Oblast

The Order of Friendship of Peoples

Igor Vladimirovich Skrypnik--director of the Institute of Applied Mathematics and Mechanics of the Ukrainian SSR Academy of Sciences.

The Badge of Honor

Nikolay Moiseyevich Kovtun--director of the Donetsk Physical Technical Institute of the Ukrainian SSR Academy of Sciences.

Nelya Alekseyevna Orlova--chief of a sector of the Institute of Industrial Economics of the Ukrainian SSR Academy of Sciences.

Anatoliy Fedorovich Popov--director of the Institute of Physical Organic Chemistry and Coal Chemistry of the Ukrainian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Mariya Prokopyevna Potapova--lathe operator of a pilot works of the Donetsk Physical Technical Institute of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Leonid Ivanovich Kostenko--chief of a laboratory of the Institute of Physical Organic Chemistry and Coal Chemistry of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Aleksandr Zakharovich Glukhov--senior scientific associate of the Donetsk Botanical Garden of the Ukrainian SSR Academy of Sciences.

Galina Aleksandrovna Ilina--chief of a department of the Institute of Industrial Economics of the Ukrainian SSR Academy of Sciences.

Arkadiy Yakovlevich Laptiyenko--chief project designer of a special design and technological bureau of the Donetsk Physical Technical Institute of the Ukrainian SSR Academy of Sciences.

The City of Kiev

The Order of Lenin

Viktor Grigoryevich Baryakhtar--director of the Institute of Metal Physics of the Ukrainian SSR Academy of Sciences.

Vera Iosifovna Bilay--chief of a department of the Institute of Microbiology and Virology imeni D.K. Zabolotnyy of the Ukrainian SSR Academy of Sciences.

Vladimir Konstantinovich Lebedev--deputy director of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Ivan Illarionovich Lukinov--director of the Institute of Economics of the Ukrainian SSR Academy of Sciences.

Viktor Ivanovich Trefilov--director of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

The Order of the October Revolution

Mikhail Semenovich Brodin--chief of a department of the Institute of Physics of the Ukrainian SSR Academy of Sciences.

Boris Nikolayevich Malinovskiy--chief of a department of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Irina Nikolayevna Melnikova--chief of a department of the Institute of History of the Ukrainian SSR Academy of Sciences.

Vladimir Vasilyevich Morgun--chief of a department of the Institute of Molecular Biology and Genetics of the Ukrainian SSR Academy of Sciences.

Viktor Mikhaylovich Yurchenko--tuner of radio equipment of the Special Design Bureau of Mathematical Machines and Systems of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

The Order of Labor Red Banner

Filipp Illarionovich Andon--director of the Special Design and Technological Bureau of Software of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Yevgeniy Aleksandrovich Andriyevskiy--chief of a laboratory of the Institute of Electrodynamics of the Ukrainian SSR Academy of Sciences.

Sergey Afanasyevich Boyko--leader of a brigade of electricians of the pilot plant of welding equipment of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Yevgeniy Georgiyevich Bulakh--chief of a department of the Institute of Geophysics imeni S.I. Subbotin of the Ukrainian SSR Academy of Sciences.

Aleksandr Nikolayevich Guz--director of the Institute of Mechanics of the Ukrainian SSR Academy of Sciences.

Igor Aleksandrovich Dzeverin--director of the Institute of Literature imeni T.G. Shevchenko of the Ukrainian SSR Academy of Sciences.

Yuriy Ivanovich Drabovich--deputy director of the Institute of Electrodynamics of the Ukrainian SSR Academy of Sciences.

Gennadiy Gavrilovich Koryuk--director of a special design and technological bureau of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Leonid Fedorovich Kolesnichenko--chief of a department of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Valeriy Pavlovich Kukhar--academician secretary of the Chemistry and Chemical Technology Department of the Ukrainian SSR Academy of Sciences.

Sergey Ivanovich Kuchuk-Yatsenko--deputy director of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Vsevolod Feodosyevich Lapchinskiy--chief of a laboratory of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Gennadiy Kharlampiyevich Matsuka--director of the Institute of Molecular Biology and Genetics of the Ukrainian SSR Academy of Sciences.

Anatoliy Alekseyevich Morozov--director of the Special Design Bureau of Mathematical Machines and Systems of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Yuriy Vladimirovich Naydich--chief of a department of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Vadim Grigoryevich Pinchuk--director of the Institute of Problems of Oncology imeni R.Ye. Kavetskiy of the Ukrainian SSR Academy of Sciences.

Valentin Vasilyevich Rogov--chief of a department of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Vitaliy Makarovich Rusanovskiy--director of the Institute of Linguistics imeni A.A. Potebnya of the Ukrainian SSR Academy of Sciences.

Filipp Nikolayevich Serkov--deputy director of the Institute of Physiology imeni A.A. Bogomolets of the Ukrainian SSR Academy of Sciences.

Aleksey Ivanovich Feoktistov--chief of a department of the Institute of Nuclear Research of the Ukrainian SSR Academy of Sciences.

Valentin Tikhonovich Cherepin--chief of a department of the Institute of Metal Physics of the Ukrainian SSR Academy of Sciences.

Vladimir Sergeyevich Shumikhin--deputy director of the Institute of Casting Problems of the Ukrainian SSR Academy of Sciences.

The Order of Friendship of Peoples

Fedor Khristoforovich Buytsev--chief of a scientific and technical bureau of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Aleksandr Vladimirovich Gorodyskiy--director of the Institute of General and Inorganic Chemistry of the Ukrainian SSR Academy of Sciences.

Anatoliy Andreyevich Dolinskiy--director of the Institute of Technical Thermal Physics of the Ukrainian SSR Academy of Sciences.

Viktor Fedorovich Yevdokimov--chief of a department of the Institute of Problems of Modeling in Power Engineering of the Ukrainian SSR Academy of Sciences.

Yuliya Vladimirovna Kapitonova--chief of a department of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Viktor Nikolayevich Klimenko--deputy director of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Ilya Grigoryevich Kolchinskiy--senior scientific associate-consultant of the Main Astronomical Observatory of the Ukrainian SSR Academy of Sciences.

Oleg Kuzmich Nazarenko--chief of a department of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Valentin Demidovich Novikov--deputy chief of the Scientific Organization Department of the Presidium of the Ukrainian SSR Academy of Sciences.

Oleg Aleksandrovich Rozenberg--chief of a department of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Viktor Dmitriyevich Romanenko--director of the Institute of Hydrobiology of the Ukrainian SSR Academy of Sciences.

The Badge of Honor

Rostislav Mitrofanovich Beloded--chief of the International Relations Administration of the Ukrainian SSR Academy of Sciences.

Nina Vsevolodovna Belyakova--chief of the Administration for the Monitoring of Fulfillment and Business Correspondence of the Ukrainian SSR Academy of Sciences.

Petr Fedorovich Bernatskiy--operator of a truck crane of the motor transport enterprise of expeditionary and special vehicles of the Ukrainian SSR Academy of Sciences.

Aleksandr Ivanovich Borisyuk--deputy chief of the Scientific Organization Department of the Presidium of the Ukrainian SSR Academy of Sciences.

Lev Ivanovich Budarin--chief of a department of the Institute of Physical Chemistry imeni L.V. Pisarzhevskiy of the Ukrainian SSR Academy of Sciences.

Georgiy Aleksandrovich Dubinchuk--deputy chief of a special design and technological bureau of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Georgiy Sergeyevich Dubskiy--chief of a department of a special design and technological bureau with a pilot works of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Sergey Dmitriyevich Zubkov--director of the Institute of Art Criticism, Folklore, and Ethnography imeni M.F. Rylskiy of the Ukrainian SSR Academy of Sciences.

Petr Fedorovich Yolan--deputy director of the Institute of Philosophy of the Ukrainian SSR Academy of Sciences.

Mikhail Dmitriyevich Kachalovskiy--deputy chief of the Capital Construction Administration of the Ukrainian SSR Academy of Sciences.

Valeriy Maksimovich Kiyenko--scientific secretary of the Institute of Physiology imeni A.A. Bogomolets of the Ukrainian SSR Academy of Sciences.

Mikhail Savvich Kovalchenko--chief of a department of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Petr Alekseyevich Kosenko--director of the pilot plant of welding materials of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Yuriy Georgiyevich Krivonos--scientific secretary of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Galina Yevdokimovna Kuzmenko--chief of a department of the Special Design Bureau of Mathematical Machines and Systems of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Leonid Nikolayevich Markovskiy--director of the Institute of Organic Chemistry of the Ukrainian SSR Academy of Sciences.

Leonid Iosifovich Marmalevskiy--chief of the Specialized Repair and Construction Administration of the Ukrainian SSR Academy of Sciences.

Ninel Petrovna Mikhaylova--chief of a laboratory of the Institute of Geophysics imeni S.I. Subbotin of the Ukrainian SSR Academy of Sciences.

Lyudmila Ivanovna Musatenko--chief of a department of the Institute of Botany imeni N.G. Kholodnyy of the Ukrainian SSR Academy of Sciences.

Vladimir Mikhaylovich Ogenko--director of a special design and technological bureau of the Surface Chemistry Department of the Institute of Physical Chemistry imeni L.V. Pisarzhevskiy of the Ukrainian SSR Academy of Sciences.

Aleksandr Vasilyevich Palagin--chief of a department of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Vyacheslav Vasilyevich Petrov--manager of a department of the Institute of Problems of Modeling in Power Engineering of the Ukrainian SSR Academy of Sciences.

Viktor Nikolayevich Petrulenkov--chief engineer of the Institute of Metal Physics of the Ukrainian SSR Academy of Sciences.

Anatoliy Terentyevich Pilipenko--director of the Institute of Colloidal Chemistry and Hydrochemistry imeni A.V. Dumanskiy of the Ukrainian SSR Academy of Sciences.

Ivan Afanasyevich Ryzhenko--deputy director of the Institute of Technical Thermal Physics of the Ukrainian SSR Academy of Sciences.

Oleg Vyacheslavovich Snitko--director of the Institute of Semiconductors of the Ukrainian SSR Academy of Sciences.

Vladimir Aleksandrovich Strizhalo--chief of a department of the Institute of Strength Problems of the Ukrainian SSR Academy of Sciences.

Leonid Leonidovich Sukhikh--chief of a department of a special design and technological bureau of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Tatyana Mikhaylovna Cherevchenko--deputy director of the Central Republic Botanical Garden of the Ukrainian SSR Academy of Sciences.

Anatoliy Dmitriyevich Cherednik--chief of a sector of a special design and technological bureau of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Nikolay Petrovich Shcherbak--director of the Institute of Geochemistry and Mineral Physics of the Ukrainian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Iuiza Aleksandrovna Avramenko--mold baker of the pilot plant of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Nikolay Nikolayevich Balov--adjuster of complex equipment and instruments of the Institute of Botany imeni N.G. Kholodnyy of the Ukrainian SSR Academy of Sciences.

Nikolay Ivanovich Bilinskiy--mechanic of the pilot works of the Institute of General and Inorganic Chemistry of the Ukrainian SSR Academy of Sciences.

Aleksandr Leonidovich Bogdanov--electric welder of the pilot plant of special electrometallurgy of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Viktor Vasilyevich Bondarenko--mechanic of a special design and technological bureau with a pilot works of the Institute of Strength Problems of the Ukrainian SSR Academy of Sciences.

Nikolay Yegorovich Bykov--lathe operator of a special design and technological bureau of the Institute of Problems of Material Sciences of the Ukrainian SSR Academy of Sciences.

Petr Dmitriyevich Vasilenko--carpenter of the experimental plant of laboratory equipment of the Ukrainian SSR Academy of Sciences.

Vasiliy Adamovich Grishchuk--milling machine operator of the experimental works of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.



Olga Vladimirovna Gulyayeva--electroplater of a special design and technological bureau with a pilot works of the Institute of Nuclear Research of the Ukrainian SSR Academy of Sciences.

Raisa Fedorovna Gumenyuk--janitor of Housing and Municipal Services Office No 1 of the Ukrainian SSR Academy of Sciences.

Nikolay Ivanovich Gura--instrument control man of catalyzer units of the pilot works of the Institute of Physical Chemistry imeni L.V. Pisarzhevskiy of the Ukrainian SSR Academy of Sciences.

Vasiliy Prokofyevich Davidyuk--carpenter of the Construction and Installation Administration of the Ukrainian SSR Academy of Sciences.

Aleksandr Leontyevich Zyumchenko--operator of the special design and technological bureau with a pilot works of glass-reinforced plastics of the Institute of Mechanics of the Ukrainian SSR Academy of Sciences.

Vasiliy Gavrilovich Ivanov--lathe operator of the pilot plant of welding equipment of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Nikolay Vladimirovich Kaluga--blaster of the a special design and technological bureau with a pilot works of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Nikolay Vasilyevich Kirushko--mechanic of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Ivan Sergeyevich Korinchuk--press operator of a special design and technological bureau of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Mikhail Matveyevich Lyulyayev--wire cutter of the pilot plant of welding materials of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Nikolay Mikhaylovich Malyuk--leader of a brigade of electricians of the pilot plant of welding equipment of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Nina Aleksandrovna Marushchak--bookbinder of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Boris Afanasyevich Melnik--model maker of the pilot works of the Institute of Casting Problems of the Ukrainian SSR Academy of Sciences.

Igor Mikhaylovich Nazarov--senior foreman of the pilot works of the Institute of Technical Thermal Physics of the Ukrainian SSR Academy of Sciences.

Grigoriy Ivanovich Pogrebnyy--electrician of the Special Design Bureau of Mathematical Machines and Systems of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Anatoliy Semenovich Portyanyy--mechanic of the Akademzhilteploset enterprise of the Ukrainian SSR Academy of Sciences.

Konstantin Semenovich Repich--milling machine operator of a special design and technology bureau with a pilot works of the Institute of Metal Physics of the Ukrainian SSR Academy of Sciences.

Anatoliy Kirillovich Sanovskiy--mechanic of a special design and technological bureau of the Surface Chemistry Department of the Institute of Physical Chemistry imeni L.V. Pisarzhevskiy of the Ukrainian SSR Academy of Sciences.

Petr Mikhaylovich Sergiyenko--mechanic of the pilot plant of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Aleksandr Ivanovich Sudeykin--mechanic of the experimental design works of the Institute of Physiology imeni A.A. Bogomolets of the Ukrainian SSR Academy of Sciences.

Ivan Petrovich Timofeyev--leader of a brigade of mechanics of a special design and technological bureau with a pilot works of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Leonid Petrovich Troyan--sanitary engineering mechanic of Housing and Municipal Services Office No 3 of the Ukrainian SSR Academy of Sciences.

Nikolay Viktorovich Khorenzhenko--leader of a brigade of electricians of the pilot plant of welding equipment of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Oleg Leonidovich Chemisov--grinder of a pilot plant of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Anatoliy Nikolayevich Chernyy--lathe operator of the pilot works of heat- and mass-transfer equipment of the Institute of Technical Thermal Physics of the Ukrainian SSR Academy of Sciences.

Vasiliy Ivanovich Shandra--mason of the Repair and Construction Administration of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Aleksandr Petrovich Akimenko--deputy chief of the Personnel Administration of the Ukrainian SSR Academy of Sciences.

Valeriy Viktorovich Akulenko--chief of the Foreign Languages Chair of the Ukrainian SSR Academy of Sciences.

Vladimir Petrovich Berezanskiy--lathe operator of the Special Design and Technological Bureau of Physical Instrument Making with a pilot works of the Institute of Physics of the Ukrainian SSR Academy of Sciences.

Aleksandr Dmitriyevich Vasilyev--senior scientific associate of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Ilya Grigoryevich Veksler--senior scientific associate of the Institute of Problems of Oncology imeni R.Ye. Kavetskiy of the Ukrainian SSR Academy of Sciences.

Igor Vladimirovich Volkov--deputy director of the Institute of Electrodynamics of the Ukrainian SSR Academy of Sciences.

Viktor Leonidovich Volkovich--chief of a department of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Erast Anatolyevich Golovko--chief of a department of the Central Republic Botanical Garden of the Ukrainian SSR Academy of Sciences.

Nikolay Semenovitch Gonchar--senior scientific associate of the Institute of Theoretical Physics of the Ukrainian SSR Academy of Sciences.

Yuriy Yakovlevich Gretskiy--chief of a laboratory of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Anna Savvichna Grigoryeva--senior scientific associate of the Institute of Physical Chemistry imeni L.V. Pisarzhevskiy of the Ukrainian SSR Academy of Sciences.

Eduard Ivanovich Gritsenko--chief of a laboratory of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Aleksandr Aleksandrovich Dobronravov--senior scientific associate of the Institute of Hydromechanics of the Ukrainian SSR Academy of Sciences.

Yuriy Mikhaylovich Dovgal--senior scientific associate of the Institute of Geological Sciences of the Ukrainian SSR Academy of Sciences.

Igor Nikolayevich Dubinskiy--chief of a department of a special design and technological bureau with a pilot works of the Institute of Metal Physics of the Ukrainian SSR Academy of Sciences.

Konstantin Yefimovich Yesipchuk--deputy director of the Institute of Geochemistry and Mineral Physics of the Ukrainian SSR Academy of Sciences.

Anatoliy Mikhaylovich Zdorovets--tuner of radio equipment of the special design and technological bureau with an experimental works of thermal physics instrument making of the Institute of Technical Thermal Physics of the Ukrainian SSR Academy of Sciences.

Yelena Petrovna Isichenko--scientific secretary of the Institute of Geophysics imeni S.I. Subbotin of the Ukrainian SSR Academy of Sciences.

Leonid Antonovich Iskra--chief project designer of a special design and technological bureau of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Mikhail Trofimovich Kovalenko--chief of a shop of a special design and technological bureau of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Nadezhda Konstantinovna Kovalenko--senior scientific associate of the Institute of Microbiology and Virology imeni D.K. Zabolotnyy of the Ukrainian SSR Academy of Sciences.

Boris Ivanovich Kovalchuk--chief of a laboratory of the Institute of Strength Problems of the Ukrainian SSR Academy of Sciences.

Vitaliy Arnoldovich Kordyum--chief of a department of the Institute of Molecular Biology and Genetics of the Ukrainian SSR Academy of Sciences.

Roman Ivanovich Kostyk--chief of a department of the Main Astronomical Observatory of the Ukrainian SSR Academy of Sciences.

Anatoliy Ivanovich Kostyuk--scientific secretary of the Physical and Technical Problems of Material Science Department of the Ukrainian SSR Academy of Sciences.

Aleksandr Aleksandrovich Kot--chief of a sector of a special design and technological bureau of the Institute of Hydromechanics of the Ukrainian SSR Academy of Sciences.

Petr Dmitriyevich Kurganskiy--deputy chief of a shop of a pilot works of the Institute of Organic Chemistry of the Ukrainian SSR Academy of Sciences.

Viktor Ivanovich Lozenko--chief of a department of a special design and technological bureau of the Institute of Casting Problems of the Ukrainian SSR Academy of Sciences.

Yevgeniy Vladimirovich Maksimov--senior scientific associate of the Institute of Archeology of the Ukrainian SSR Academy of Sciences.

Anatoliy Yefimovich Marchenko--chief of a laboratory of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Natalya Arkadyevna Meshkova-Klimenko--deputy director of the Institute of Colloidal Chemistry and Hydrochemistry imeni A.V. Dumanskiy of the Ukrainian SSR Academy of Sciences.

Vladimir Vasilyevich Onikiyenko--chief of a department of the Council for the Study of Productive Forces of the Ukrainian SSR of the Ukrainian SSR Academy of Sciences.

Vladimir Antonovich Onishchenko--chief of a works of a special design and technological bureau of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Nikolay Ilich Pavlenko--chief of a laboratory of the Petrochemistry Department of the Institute of Physical Organic Chemistry and Coal Chemistry of the Ukrainian SSR Academy of Sciences.

Nikolay Nikolayevich Pavlenko--mechanic of the Institute of Nuclear Research of the Ukrainian SSR Academy of Sciences.

Vladimir Mikhaylovich Paliy--deputy chief scientific secretary of the Presidium of the Ukrainian SSR Academy of Sciences.

Ivan Ivanovich Pershukov--deputy director of the Institute of Problems of Modeling in Power Engineering of the Ukrainian SSR Academy of Sciences.

Darya Ivanovna Popovich--science editor of the Naukova dumka Publishing House of the Ukrainian SSR Academy of Sciences.

Leonid Nikiforovich Rogach--chief of a department of the Special Design Bureau of Mathematical Machines and Systems of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Mikhail Karapetovich Rostomyan--chief of a department of the Special Design and Technological Bureau of Software of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Pavel Mikhaylovich Siverskiy--chief of a department of the Special Design Bureau of Mathematical Machines and Systems of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Yelena Vladimirovna Solodova--chief of a group of the Institute of Biochemistry imeni A.V. Palladin of the Ukrainian SSR Academy of Sciences.

Marat Samuilovich Soskin--chief of a department of the Institute of Physics of the Ukrainian SSR Academy of Sciences.

Valentin Dmitriyevich Stepanenko--deputy administrator of affairs of the Ukrainian SSR Academy of Sciences.

Vladimir Konstantinovich Tenetov--leader of a brigade of mechanics of the pilot plant of welding equipment of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Yuriy Grigoryevich Tkachenko--chief of a laboratory of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Boris Yunovich Tumas--chief engineer of a pilot plant of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Yuriy Aleksandrovich Tkhorik--chief of a department of the Institute of Semiconductors of the Ukrainian SSR Academy of Sciences.

Yuriy Arkadyevich Fialkov--senior scientific associate of the Institute of Organic Chemistry of the Ukrainian SSR Academy of Sciences.

Lyubov Vasilyevna Chuyko--senior scientific associate of the Institute of Economics of the Ukrainian SSR Academy of Sciences.

Ivan Ivanovich Chuchupa--milling machine operator of an experimental works of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Mikhail Artemovich Shaleyko--chief of a group of the Institute of Nuclear Physics of the Ukrainian SSR Academy of Sciences.

Viktor Petrovich Sharpilo--chief of a department of the Institute of Zoology imeni I.I. Shmalgauzen of the Ukrainian SSR Academy of Sciences.

Vladimir Nikolayevich Shcherbin--chief designer of a special design and technological bureau with a pilot works of the Institute of Nuclear Research of the Ukrainian SSR Academy of Sciences.

Mikhail Fedorovich Yakovlev--senior scientific associate of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Antonina Grigoryevna Avdiyevskaya--chief of a department of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Anatoliy Ivanovich Antonenko--chief of a department of a special design and technological bureau of the Institute of Electrodynamics of the Ukrainian SSR Academy of Sciences.

Viktoriya Pavlovna Bannikova--chief of a department of the Institute of Botany imeni N.G. Kholodnyy of the Ukrainian SSR Academy of Sciences.

Klavdiya Nikiforovna Bevzyuk--senior educator and methods specialist of Nursery No 442 of the Ukrainian SSR Academy of Sciences.

Sofya Stanislavovna Berezanskaya--senior scientific associate of the Institute of Archeology of the Ukrainian SSR Academy of Sciences.

Arnold Anatolyevich Berezovskiy--chief of a laboratory of the Institute of Mathematics of the Ukrainian SSR Academy of Sciences.

Valentina Aleksandrovna Bogdanova--senior scientific associate of the Council for the Study of Productive Forces of the Ukrainian SSR of the Ukrainian SSR Academy of Sciences.

Vladimir Vasilyevich Boyko--chief of a group of the Petrochemistry Department of the Institute of Physical Organic Chemistry and Coal Chemistry of the Ukrainian SSR Academy of Sciences.

Nikolay Dmitriyevich Butskiy--chief of a group of the Institute of Technical Thermal Physics of the Ukrainian SSR Academy of Sciences.

Nikolay Sergeyevich Veselovskiy--senior scientific associate of the Institute of Physiology imeni A.A. Bogomolets of the Ukrainian SSR Academy of Sciences.

Anatoliy Petrovich Grekov--chief of a department of the Institute of Chemistry of High Molecular Compounds of the Ukrainian SSR Academy of Sciences.

Sanzhik Sarkisovich Dzhamarov--deputy chief of a department of a special design and technological bureau of the Institute of Problems of Material Sciences of the Ukrainian SSR Academy of Sciences.

Vitaliy Fedorovich Dzyubenko--sanitary engineering mechanic of Housing and Municipal Services Office No 2 of the Ukrainian SSR Academy of Sciences.

Vladimir Sergeyevich Dobrolyubov--design engineer of a pilot works of the Main Astronomical Observatory of the Ukrainian SSR Academy of Sciences.

Nina Grigoryevna Yefremenko--chief of the typing pool of the Presidium of the Ukrainian SSR Academy of Sciences.

Ivan Petrovich Zhuravl--lathe operator of a pilot works of the Institute of Mechanics of the Ukrainian SSR Academy of Sciences.

Nikolay Ivanovich Zaika--chief of a department of the Institute of Nuclear Research of the Ukrainian SSR Academy of Sciences.

Olga Nikolayevna Ivanova--chief of a department of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Inga Vladimirovna Kasyanenko--chief of a department of the Institute of Problems of Oncology imeni R.Ye. Kavetskiy of the Ukrainian SSR Academy of Sciences.

Yuriy Stepanovich Kiselev--operator of compressor plants of the Institute of Organic Chemistry of the Ukrainian SSR Academy of Sciences.

Yevdokiya Pavlovna Kobzar--foreman of landscaping of the Central Republic Botanical Garden of the Ukrainian SSR Academy of Sciences.

Vladimir Vasilyevich Kolotyy--chief of a laboratory of the Institute of Nuclear Research of the Ukrainian SSR Academy of Sciences.

Yuriy Petrovich Korchevyy--manager of a department of the Institute of Problems of Modeling in Power Engineering of the Ukrainian SSR Academy of Sciences.

Georgiy Dmitriyevich Kostenko--chief of a laboratory of the Institute of Casting Problems of the Ukrainian SSR Academy of Sciences.

Vladimir Stepanovich Kostrubitskiy--electric welding of the pilot plant of welding materials of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Iyudmila Stepanovna Kravchuk--design engineer of a special design and technological bureau of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Vladislav Petrovich Krivitskiy--senior scientific associate of the Institute of Metal Physics of the Ukrainian SSR Academy of Sciences.

Ivan Petrovich Krivoruchko--chief engineer of a special design and technological bureau with a pilot works of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Anatoliy Ivanovich Kuzminov--mechanic of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Viktor Anatolyevich Kunakh--chief of a laboratory of the Institute of Molecular Biology and Genetics of the Ukrainian SSR Academy of Sciences.

Petr Iosifovich Kupriyenko--senior scientific associate of the Institute of Colloidal Chemistry and Hydrochemistry imeni A.V. Dumanskiy of the Ukrainian SSR Academy of Sciences.

Svetlana Fedorovna Lakhturova--chief of a sector of the Central Scientific Library of the Ukrainian SSR Academy of Sciences.

Vladislav Vladimirovich Leonidov--chief designer of the Special Design Bureau of Mathematical Machines and Systems of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Leonid Avdeyevich Leshchenko--chief of a department of the Institute of Social and Economic Problems of Foreign Countries of the Ukrainian SSR Academy of Sciences.

Lyudmila Yakovlevna Lovskaya--chief of an editorial board of the Naukova dumka Publishing House of the Ukrainian SSR Academy of Sciences.

Olga Grigoryevna Massalskaya--design engineer of the Special Design and Technological Bureau of Software of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Mikhail Dmitriyevich Mitlikin--deputy chief of a department of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Ivan Yuryevich Nemish--chief of a department of a special design and technological bureau with a pilot works of the Institute of Semiconductors of the Ukrainian SSR Academy of Sciences.



Vladimir Ivanovich Nikishov--senior scientific associate of the Institute of Hydromechanics of the Ukrainian SSR Academy of Sciences.

Anatoliy Afanasyevich Omelchuk--senior scientific associate of the Institute of General and Inorganic Chemistry of the Ukrainian SSR Academy of Sciences.

Nikolay Ivanovich Omelyanovich--mockup and model maker of the Institute of Geological Sciences of the Ukrainian SSR Academy of Sciences.

Tatyana Danilovna Ositinskaya--senior scientific associate of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Aleksandr Aleksandrovich Pereloma--chief of a department of the Special Design Bureau of Mathematical Machines and Systems of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Nikolay Borisovich Pivovarskiy--senior engineer of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Nikolay Yuryevich Pikhur--chief of a sector of the Special Design and Technological Bureau of Physical Instrument Making with a pilot works of the Institute of Physics of the Ukrainian SSR Academy of Sciences.

Emmanuil Volfovich Prilutskiy--senior scientific associate of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Nikolay Vladimirovich Puzey--winder of electrical machines and instruments of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Aleksandr Ivanovich Pyatnichko--chief of a department of the Institute of Gas of the Ukrainian SSR Academy of Sciences.

Viktor Akimovich Rezvanyuk--chief engineer of the Special Design and Technological Bureau of Software of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Zakhariy Kirillovich Simorot--chief of a department of the Institute of State and Law of the Ukrainian SSR Academy of Sciences.

Sergey Valentinovich Stalinskiy--chief of a sector of a special design and technological bureau of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Aleksandr Vasilyevich Stepichev--chief engineer of the Institute of Problems of Material Science of the Ukrainian SSR Academy of Sciences.

Anna Mikhaylovich Strizhkova--senior scientific associate of the Institute of Microbiology and Virology imeni D.K. Zabolotnyy of the Ukrainian SSR Academy of Sciences.

Galina Ivanovna Sudak--physician of Hospital with Polyclinic No 1 of the Ukrainian SSR Academy of Sciences.

Promarz Melikovich Tamrazov--chief of a laboratory of the Institute of Mathematics of the Ukrainian SSR Academy of Sciences.

Anatoliy Nikolayevich Tarasenko--chief of a sector of a special design and technological bureau of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Feliks Dmitriyevich Tyshkevich--leader of a brigade of steel workers of the pilot plant of special electrometallurgy of the Institute of Electric Welding imeni Ye.O. Paton of the Ukrainian SSR Academy of Sciences.

Leonid Andreyevich Khilinskiy--deputy director of the Institute of Geophysics imeni S.I. Subbotin of the Ukrainian SSR Academy of Sciences.

Nikolay Nikiforovich Shevchenko--senior scientific associate-consultant of the Institute of Plant Physiology of the Ukrainian SSR Academy of Sciences.

Stepan Fedorovich Shpak--mechanic-repairman of a pilot plant of the Institute of Superhard Materials of the Ukrainian SSR Academy of Sciences.

Larisa Vsevolodovna Ellanskaya--chief of a department of the Special Design and Technological Bureau of Software of the Institute of Cybernetics imeni V.M. Glushkov of the Ukrainian SSR Academy of Sciences.

Crimean Oblast

The Medal "For Labor Prowess"

Vladimir Ivanovich Pronik--senior scientific associate of the Crimean Astrophysical Observatory of the Ukrainian SSR Academy of Sciences.

The City of Sevastopol

The Badge of Honor

Nikolay Nikolayevich Karnaushenko--deputy director of the Marine Hydrophysics Institute of the Ukrainian SSR Academy of Sciences.

Alla Leontyevna Morozova--director of the Institute of Biology of Southern Seas imeni A.O. Kovalevskiy of the Ukrainian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Vladimir Mikhaylovich Poberekhin--lathe and drill operator of a special design and technological bureau of the Marine Hydrophysics Institute of the Ukrainian SSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Velvel Isaakovich Zats--chief of a department of the Institute of Biology of Southern Seas imeni A.O. Kovalevskiy of the Ukrainian SSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Igor Lvovich Isayev--chief of a laboratory of the Marine Hydrophysics Institute of the Ukrainian SSR Academy of Sciences.

Lev Nikolayevich Pshenin--senior scientific associate of the Institute of Biology of Southern Seas imeni A.O. Kovalevskiy of the Ukrainian SSR Academy of Sciences.

#### Ivov Oblast

#### The Order of Lenin

Yaroslav Stepanovich Podstrigach--director of the Institute of Applied Problems of Mechanics and Mathematics of the Ukrainian SSR Academy of Sciences.

#### The Order of Labor Red Banner

Georgiy Grigoryevich Maksimovich--deputy director of the Physical Mechanical Institute imeni G.V. Karpenko of the Ukrainian SSR Academy of Sciences.

#### The Order of Friendship of Peoples

Yuliy Ivanovich Babey--chief of a department of the Physical Mechanical Institute imeni G.V. Karpenko of the Ukrainian SSR Academy of Sciences.

Mikhail Vasilyevich Bryk--director of the Institute of Social Sciences of the Ukrainian SSR Academy of Sciences.

#### The Bade of Honor

Konstantin Borisovich Katsov--deputy director of a special design and technological bureau of the Physical Mechanical Institute imeni G.V. Karpenko of the Ukrainian SSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Vyacheslav Konstantinovich Kireytsev--lathe operator of a pilot plant of the Physical Mechanical Institute imeni G.V. Karpenko of the Ukrainian SSR Academy of Sciences.

Bogdan Nikolayevich Mikhaylyuk--mechanic of a pilot works of the Physical Mechanical Institute imeni G.V. Karpenko of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Vasiliy Antonovich Osadchuk--chief of a department of the Institute of Applied Problems of Mechanics and Mathematics of the Ukrainian SSR Academy of Sciences.

Georgiy Borisovich Simonenko--director of a pilot plant of the Physical Mechanical Institute imeni G.V. Karpenko of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Yuriy Dmitriyevich Zozulyak--senior scientific associate of the Institute of Applied Problems of Mechanics and Mathematics of the Ukrainian SSR Academy of Sciences.

Stepan Yevstafiyevich Kovchik--chief of a department of a special design and technological bureau of the Physical Mechanical Institute imeni G.V. Karpenko of the Ukrainian SSR Academy of Sciences.

Roman Fedorovich Fedoriv--chief of a department of the Physical Mechanical Institute imeni G.V. Karpenko of the Ukrainian SSR Academy of Sciences.

Emmanuil Bogdanovich Chekalyuk--chief of a department of the Institute of Geology and Geochemistry of Combustible Minerals of the Ukrainian SSR Academy of Sciences.

Nikolayev Oblast

The Order of Friendship of Peoples

Grigoriy Afanasyevich Gulyy--director of the Planning and Design Bureau of Electrohydraulics of the Ukrainian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Anatoliy Dmitriyevich Zanizdra--electrician of a pilot plant of the Planning and Design Bureau of Electrohydraulics of the Ukrainian SSR Academy of Sciences.

Viktor Nikolayevich Stepin--mechanic of assembly operations of an experimental works of the Planning and Design Bureau of Electrohydraulics of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Mariya Filippovna Protsenko--deputy chief of a department of the Planning and Design Bureau of Electrohydraulics of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Arnold Vasilyevich Tsvetkov--chief of a sector of the Planning and Design Bureau of Electrohydraulics of the Ukrainian SSR Academy of Sciences.

Odessa Oblast

The Order of Friendship of Peoples

Sergey Andreyevich Andronati--director of the Physical Chemistry Institute imeni A.V. Bogatskiy of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Ninel Petrovna Yefryushina--chief of a department of the Physical Chemistry Institute imeni A.V. Bogatskiy of the Ukrainian SSR Academy of Sciences.

Nikolay Danilovich Ivanov--smelter of a pilot plant of the Physical Chemistry Institute imeni A.V. Bogatskiy of the Ukrainian SSR Academy of Sciences.

Kharkov Oblast

The Order of the October Revolution

Valentin Ivanovich Grishchenko--director of the Institute of Problems of Cryobiology and Cryomedicine of the Ukrainian SSR Academy of Sciences.

The Order of Labor Red Banner

Boris Iyeremiyevech Verkin--director of the Physical Technical Institute of Low Temperatures of the Ukrainian SSR Academy of Sciences.

The Order of Friendship of Peoples

Anatoliy Petrovich Yevdokimov--chief of a group of the Institute of Radio Physics and Electronics of the Ukrainian SSR Academy of Sciences.

Anatoliy Nikolayevich Podgornyy--director of the Institute of Problems of Machine Building of the Ukrainian SSR Academy of Sciences.

The Badge of Honor

Yuriy Sergeyevich Vorobyev--chief of a department of the Institute of Problems of Machine Building of the Ukrainian SSR Academy of Sciences.

Leonid Nikolayevich Litvinenko--director of the Radio Astronomy Institute of the Ukrainian SSR Academy of Sciences.

Vadim Antonovich Pavlyuk--chief of a department of a special design and technological bureau of the Physical Technical Institute of Low Temperatures of the Ukrainian SSR Academy of Sciences.

Yevgeniy Yakovlevich Khruslov--chief of a laboratory of the Physical Technical Institute of Low Temperatures of the Ukrainian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Leonid Sergeyevich Gnedoy--lathe operator of a pilot plant of the Physical Technical Institute of Low Temperatures of the Ukrainian SSR Academy of Sciences.

Vladimir Viktorovich Mundrusov--milling machine operator of a pilot works of the Institute of Problems of Machine Building of the Ukrainian SSR Academy of Sciences.

Nikolay Mikhaylovich Starchenko--fitter of a special design and technological bureau of the Institute of Radio Physics and Electronics of the Ukrainian SSR Academy of Sciences.

Anatoliy Nikolayevich Stryapchiy--electric welding of a pilot works of the Physical Technical Institute of Low Temperatures of the Ukrainian SSR Academy of Sciences.

Anatoliy Grigoryevich Timoshevskiy--tuner of radio equipment of an experimental works of the Institute of Radio Physics and Electronics of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Ivan Nikolayevich Kucheryavyy--chief of a department of the Kharkov Department of the Institute of Economics of the Ukrainian SSR Academy of Sciences.

Konstantin Pavlovich Sokolov--chief of a group of the Radio Astronomy Institute of the Ukrainian SSR Academy of Sciences.

Anatoliy Yevgenyevich Yanov--chief of a department of the Physical Technical Institute of Low Temperatures of the Ukrainian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Anatoliy Vladimirovich Protsenko--chief engineer of a special design and technological bureau of the Institute of Problems of Machine Building of the Ukrainian SSR Academy of Sciences.

Igor Georgiyevich Tuluzov--junior scientific associate of the Physical Technical Institute of Low Temperatures of the Ukrainian SSR Academy of Sciences.

Tatyana Nikolayevna Yurchenko--chief of a department of the Institute of Problems of Cryobiology and Cryomedicine of the Ukrainian SSR Academy of Sciences.

For the Belorussian SSR

Gomel Oblast

The Medal "For Labor Prowess"

Larisa Vasilyevna Zaborskaya--junior scientific associate of the Institute of Mechanics of Metal Polymer Systems of the Belorussian SSR Academy of Sciences.

Grodno Oblast

The Medal "For Labor Distinction"

Magdalena Grigoryevna Velichko--senior scientific associate of the Institute of Biochemistry of the Belorussian SSR Academy of Sciences.

The City of Minsk

The Order of Lenin

Lyubov Vladimirovna Khotyleva--director of the Institute of Genetics and Cytology of the Belorussian SSR Academy of Sciences.

The Order of the October Revolution

Stanislav Aleksandrovich Astapchik--director of the Physical Technical Institute of the Belorussian SSR Academy of Sciences.

The Order of Labor Red Banner

Stanislav Konstantinovich Kravchenko--deputy director of the Institute of Heat and Mass Transfer imeni A.V. Lykov of the Belorussian SSR Academy of Sciences.

Vasiliy Andreyevich Mostovnikov--chief of a laboratory of the Institute of Physics of the Belorussian SSR Academy of Sciences.

Anatoliy Gerasimovich Shashkov--chief of a laboratory of the Institute of Applied Physics of the Belorussian SSR Academy of Sciences.

Oleg Ivanovich Yaroshevich--chief of a laboratory of the Institute of Nuclear Power Engineering of the Belorussian SSR Academy of Sciences.

The Order of Friendship of Peoples

Vladilen Aleksandrovich Kuznetsov--deputy director of the Institute of Geochemistry and Geophysics of the Belorussian SSR Academy of Sciences.

Leonid Mikhaylovich Sushchenya--director of the Institute of Zoology of the Belorussian SSR Academy of Sciences.

#### The Badge of Honor

Aleksandr Konstantinovich Yesman--senior scientific associate of the Institute of Electronics of the Belorussian SSR Academy of Sciences.

Valentina Iosifovna Komarova--senior scientific associate of the Institute of Problems of Reliability and Durability of Machines of the Belorussian SSR Academy of Sciences.

Fedor Pavlovich Korshunov--chief of a laboratory of the Institute of Solid-State and Semiconductor Physics of the Belorussian SSR Academy of Sciences.

Mikhail Konstantinovich Mitskevich--chief of a laboratory of the Physical Technical Institute of the Belorussian SSR Academy of Sciences.

Aleksandr Iosifovich Podluzhnyy--chief of a sector of the Institute of Linguistics imeni Yakub Kolas of the Belorussian SSR Academy of Sciences.

Igor Gavrilovich Spitsyn--chief project designer of a special design and technological bureau with a pilot works of the Institute of Physics of the Belorussian SSR Academy of Sciences.

Tamara Stepanovna Cheltsova--deputy secretary of the party committee of the Belorussian SSR Academy of Sciences.

#### The Order of Labor Glory 2d Degree

Mikhail Pavlovich Chupets--mechanic of a special design bureau with a pilot works of the Institute of Heat and Mass Transfer imeni A.V. Lykov of the Belorussian SSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Nikolay Vladimirovich Artishevskiy--mechanic of a special design and technological bureau with a pilot works of the Physical Technical Institute of the Belorussian SSR Academy of Sciences.

Mariya Ivanovna Vasilyeva--typesetter of the Printing Plant imeni Frantsisko (Georgiy) Skorina of the Belorussian SSR Academy of Sciences.

Nikolay Gavrilovich Gavrichenko--mechanic of a special design bureau with a pilot works of the Institute of Nuclear Power Engineering of the Belorussian SSR Academy of Sciences.

Yevgeniy Fomich Gamanovich--lathe operator of a special design and technological bureau with a pilot works of the Institute of Electronics of the Belorussian SSR Academy of Sciences.

Anton Vasilyevich Demidovich--sanitary engineering mechanic of a repair, construction, and installation section of the Belorussian SSR Academy of Sciences.



Galina Ivanovna Masilevich--optician of a special design and technological bureau with a pilot works of the Institute of Physics of the Belorussian SSR Academy of Sciences.

Vitaliy Viktorovich Shushkevich--polisher of a special design and technological bureau with a pilot works of the Institute of Solid-State and Semiconductor Physics of the Belorussian SSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Svetlana Iosifovna Belskaya--senior scientific associate of the Institute of Experimental Botany imeni V.F. Kuprevich of the Belorussian SSR Academy of Sciences.

Alla Ivanovna Brazgovskaya--senior scientific associate of the Institute of General and Inorganic Chemistry of the Belorussian SSR Academy of Sciences.

Enessa Fedorovna Buynova--senior scientific associate of the Institute of Physical Organic Chemistry of the Belorussian SSR Academy of Sciences.

Gennadiy Pavlovich Zhavrid--scientific secretary of the Institute of Mathematics of the Belorussian SSR Academy of Sciences.

Aleksandr Nikolayevich Kapich--senior scientific associate of the Institute of Microbiology of the Belorussian SSR Academy of Sciences.

Romualda Vladimirovna Lositskaya--senior engineer of the Institute of Peat of the Belorussian SSR Academy of Sciences.

Irina Alekseyevna Mikhaylova-Stanyuta--senior scientific associate of the Institute of Economics of the Belorussian SSR Academy of Sciences.

Nikolay Iosifovich Plyushchevskiy--scientific secretary of the Chemical and Geological Sciences Department of the Belorussian SSR Academy of Sciences.

Mariya Tikhonovna Chayka--chief of a laboratory of the Institute of Photobiology of the Belorussian SSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Tamara Artemyevna Gorolevich--senior scientific associate of the Institute of Philosophy and Law of the Belorussian SSR Academy of Sciences.

Lidiya Arkhipovich Grigorenko--chief of a department of the Central Scientific Library imeni Ya. Kolas of the Belorussian SSR Academy of Sciences.

Nila Ivanovna Gurskaya--agronomist of the Central Botanical Garden of the Belorussian SSR Academy of Sciences.

Raisa Ivanovna Dorokhina--junior scientific associate of the Gerontology Sector of the Belorussian SSR Academy of Sciences.

Yelena Gennadyevna Kalechits--senior scientific associate of the Institute of History of the Belorussian SSR Academy of Sciences.

Iraida Ivanovna Kachuro--senior scientific associate of the Institute of Physiology of the Belorussian SSR Academy of Sciences.

Olga Fedorovna Nechay--senior scientific associate of the Institute of Art Criticism, Ethnography, and Folklore of the Belorussian SSR Academy of Sciences.

Klarisa Viktorovna Pilipovich--junior scientific associate of the Institute of Literature imeni Yanka Kupala of the Belorussian SSR Academy of Sciences.

Yakov Stepanovich Strelenko--driver of a vehicle of the garage of the Belorussian SSR Academy of Sciences.

Galina Zafirovna Tsapelik--deputy chief of a shop of a pilot works of the Institute of Bioorganic Chemistry of the Belorussian SSR Academy of Sciences.

For the Uzbek SSR

The Kara-Kalpak ASSR

The Order of Friendship of Peoples

Saparbay Kabulov--chief of a laboratory of the Complex Institute of Natural Sciences of the Kara-Kalpak Affiliate of the Uzbek SSR Academy of Sciences.

The Medal "For Labor Prowess"

Ulbosyn Urazbayev--junior scientific associate of the Institute of History, Language, and Literature imeni N. Davkarayev of the Kara-Kalpak Affiliate of the Uzbek SSR Academy of Sciences.

Samarkand Oblast

The Medal "For Labor Distinction"

Telman Kasimovich Khodzhayov--chief of a department of the Institute of Archeology of the Uzbek SSR Academy of Sciences.

Tashkent Oblast

The Order of Labor Glory 3d Degree

Bakha Bekbayev--senior technician of the Chimgan Seismic Station of the Institute of Seismology of the Uzbek SSR Academy of Sciences.

The City of Tashkent

The Order of Lenin

Mirza-Ali Valiyevich Mukhamedzhanov--chief of a department of the Institute of Experimental Plant Biology of the Uzbek SSR Academy of Sciences.

The Order of the October Revolution

Abdumavlyan Abdullayev--director of the Institute of Experimental Plant Biology of the Uzbek SSR Academy of Sciences.

The Order of Labor Red Banner

Aleksandr Alekseyevich Kist--deputy director of the Institute of Nuclear Physics of the Uzbek SSR Academy of Sciences.

Akhrar Muzafarovich Muzafarov--deputy director of the Biological Sciences Department of the Uzbek SSR Academy of Sciences.

Vladimir Grigoryevich Popov--chief of a laboratory of the Institute of Soil Science and Agrochemistry of the Uzbek SSR Academy of Sciences.

Vasiliy Stepanovich Trukhov--deputy director of the Physical Technical Institute imeni S.V. Starodubtsev of the Uzbek SSR Academy of Sciences.

Ibragim Khamrabayevich Khamrabayev--director of the Institute of Geology and Geophysics imeni Kh.M. Abdullayev of the Uzbek SSR Academy of Sciences.

The Order of Friendship of Peoples

Anna Ivanovna Glushenkova--director of the Institute of Chemistry of Plant Substances of the Uzbek SSR Academy of Sciences.

Telman Dadayevich Radzhabov--chief of a laboratory of the Institute of Electronics imeni U.A. Arifov of the Uzbek SSR Academy of Sciences.

Muzaffar Mukhitdinovich Khayrullayev--director of the Institute of Oriental Studies imenu Abu Raykhan Beruni of the Uzbek SSR Academy of Sciences.

The Badge of Honor

Sagdilla Abdullayevich Bakhrarov--chief of a laboratory of the Thermal Physics Department of the Uzbek SSR Academy of Sciences.

Tozhiboy Buriyev--chief of a laboratory of the Institute of Cybernetics with a computer center of the Uzbek Kibernetika Scientific Production Association of the Uzbek SSR Academy of Sciences.

Raisa Savelyevna Vernik--chief of a laboratory of the Institute of Botany of the Uzbek SSR Academy of Sciences.

Abdurakhman Asimovich Ishankhodzhayev--chief of a laboratory of the Institute of Mechanics and Seismic Resistant Construction imeni M.T. Urazbayev of the Uzbek SSR Academy of Sciences.

Irkin Krimov--director of the Special Design Bureau of Radiation Technology of the Institute of Nuclear Physics of the Uzbek SSR Academy of Sciences.

Boris Vladimirovich Loginov--senior scientific associate of the Institute of Mathematics imeni V.I. Romanovskiy of the Uzbek SSR Academy of Sciences.

Mariya Aleksandrovna Ovcharova--senior scientific associate of the Institute of Economics of the Uzbek SSR Academy of Sciences.

Mukhtar Safarbayevich Saidov--academician secretary of the Physical and Mathematical Sciences Department of the Uzbek SSR Academy of Sciences.

Muratbek Turakhozhayevich Turakhozhayev--senior scientific associate of the Institute of Chemistry of Plant Substances of the Uzbek SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Viktor Ivanovich Davydov--electric welder of the Central Planning, Design, and Technological Bureau of Scientific Instrument Making of the Uzbek SSR Academy of Sciences.

Abdulla Mirzayevich Kakhkharov--printer of the printing plant of the Fan Publishing House of the Uzbek SSR Academy of Sciences.

Raisa Yakovlevna Savostina--radio installer of a pilot experimental plant of the Uzbek Kibernetika Scientific Production Association of the Uzbek SSR Academy of Sciences.

Valeriy Grigoryevich Sidorkin--lathe operator of a pilot experimental plant of the Uzbek Kibernetika Scientific Production Association of the Uzbek SSR Academy of Sciences.

Takhir Sunnatov--auto mechanic of a pilot experimental plant of the Uzbek Kibernetika Scientific Production Association of the Uzbek SSR Academy of Sciences.

Ikrambay Tuyakovich Urumbayev--chief foreman of the Radiopreparat Cost Accounting Pilot Works of the Institute of Nuclear Physics of the Uzbek SSR Academy of Sciences.

Yuriy Georgiyevich Chirkin--mechanic of the Central Planning, Design, and Technological Bureau of Scientific Instrument Making of the Uzbek SSR Academy of Sciences.

Mukhamat Azizovich Yunusov--auto mechanic of the garage of the Uzbek SSR Academy of Sciences.

The Medal "For Labor Prowess"

Mukhamadamin Abdusalyamov--chief of a sector of the Council for the Study of Productive Forces of the Uzbek SSR Academy of Sciences.

Boris Urazbayevich Allamiyarov--senior scientific associate of the Uzbek Kibernetika Scientific Production Association of the Uzbek SSR Academy of Sciences.

Yevgeniy Sergeyevich Borodin--scientific secretary of the Botanical Garden imeni F.N. Rusanov of the Uzbek SSR Academy of Sciences.

Abdulkhay Kasymovich Valiyev--chief of a sector of the Institute of Philosophy and Law imeni I.M. Muminov of the Uzbek SSR Academy of Sciences.

Adyl Ishbayev--senior scientific associate of the Institute of Bioorganic Chemistry of the Uzbek SSR Academy of Sciences.

Makhhuba Shamsiyevna Kadyrova--senior scientific associate of the Institute of Manuscripts imeni Kh.S. Suleymanov of the Uzbek SSR Academy of Sciences.

Oleg Vladimirovich Krasilnikov--senior scientific associate of the Institute of Physiology of the Uzbek SSR Academy of Sciences.

Anvar Karimovich Mirakhmedov--deputy director of the Institute of Biochemistry of the Uzbek SSR Academy of Sciences.

Valentin Alekseyevich Omelyanenko--senior scientific associate of the Institute of Mechanics and Seismic Resistant Construction imeni M.T. Urazbayev of the Uzbek SSR Academy of Sciences.

Yudif Moiseyevna Slonim--senior scientific associate of the Astronomy Institute of the Uzbek SSR Academy of Sciences.

Nafisa Kiyamovna Sultanova--chief of a department of the Museum of History of the Peoples of Uzbekistan imeni M.T. Aybek of the Uzbek SSR Academy of Sciences.

Mukaramoy Zhuraboyevna Ergashova--junior scientific associate of the Institute of Biochemistry of the Uzbek SSR Academy of Sciences.

The Medal "For Labor Distinction"

Tamara Abdullayevna Adonyeva--chief of a laboratory of the Institute of Polymer Chemistry and Physics of the Uzbek SSR Academy of Sciences.

Rasulzhon Yuldashevich Akbarov--design engineer of a specialized planning, design, and technological bureau of the Physical Technical Institute imeni S.V. Starodubtsev of the Uzbek SSR Academy of Sciences.

Boris Mikhaylovich Beglov--director of the Institute of Chemistry of the Uzbek SSR Academy of Sciences.

Mukhabbat Salimovna Gaibnazarova--senior accountant of the Main Library of the Uzbek SSR Academy of Sciences.

Tamara Vasilyevna Golyanova--senior scientific associate of the Institute of History of the Uzbek SSR Academy of Sciences.

Yevgeniy Konstantinovich Yefimov--chief of the Planning and Finance Administration of the Presidium of the Uzbek SSR Academy of Sciences.

Tolyagan Sirazhidinovich Kamalov--chief of a laboratory of the Institute of Power Engineering and Automation of the Uzbek SSR Academy of Sciences.

Vladimir Anatolyevich Karpenko--chief designer of a special design and technological bureau of the Institute of Electronics imeni U.A. Arifov of the Uzbek SSR Academy of Sciences.

Khalida Tukhtayevna Mukhamedkhanova--senior inspector of the Administration of Scientific Personnel of the Uzbek SSR Academy of Sciences.

Saviya Suleymanovna Ramazanova--chief of a laboratory of the Institute of Microbiology of the Uzbek SSR Academy of Sciences.

Larisa Yefimovna Spektor--chief of an editorial board of the Fan Publishing House of the Uzbek SSR Academy of Sciences.

Rashid Abdulkhayevich Khaydarov--chief of a department of the Institute of Nuclear Physics of the Uzbek SSR Academy of Sciences.

Abdulkhadyr Khadzhimetovich Khayitmetov--chief of a department of the Institute of Language and Literature imeni A.S. Pushkin of the Uzbek SSR Academy of Sciences.

Shukhrat Alimovich Sharafutdinov--chief of a laboratory of the Institute of Zoology and Parasitology of the Uzbek SSR Academy of Sciences.

For the Kazakh SSR

The City of Alma-Ata

The Order of Lenin

Yevgeniy Vasilyevich Gvozdev--vice president of the Kazakh SSR Academy of Sciences.

The Order of the October Revolution

Bulat Akhmetovich Zhubanov--academician secretary of the Chemical and Technological Sciences Department of the Kazakh SSR Academy of Sciences.

#### The Order of Labor Red Banner

Zhabaykhan Mubarakovich Abdildin--academician secretary of the Social Sciences Department of the Kazakh SSR Academy of Sciences.

Shabdan Abdul-Gaparovich Bolgozhin--director of the Institute of Mining of the Kazakh SSR Academy of Sciences.

Umirzak Makhmutovich Sultangazin--academician secretary of the Physical and Mathematical Sciences Department of the Kazakh SSR Academy of Sciences.

#### The Order of Friendship of Peoples

Murat Abenovich Aytkhozhin--former director of the Institute of Molecular Biology and Biochemistry of the Kazakh SSR Academy of Sciences, now president of the Kazakh SSR Academy of Sciences.

Salyk Zimanovich Zimanov--chief of a department of the Institute of Philosophy and Law of the Kazakh SSR Academy of Sciences.

#### The Badge of Honor

Isa Omarovich Baytulin--director of the Institute of Botany of the Kazakh SSR Academy of Sciences.

Alim Yusipovich Dadabayev--chief of a laboratory of the Institute of Metallurgy and Ore Dressing of the Kazakh SSR Academy of Sciences.

Yevgeniy Stepanovich Mityushnikov--director of the garage of the Kazakh SSR Academy of Sciences.

Ivan Yakovlevich Chasnikov--director of the Institute of High Energy Physics of the Kazakh SSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Maukhida Atnagulovna Abdulkabirova--senior scientific associate of the Institute of Geological Sciences imeni K.I. Satpayev of the Kazakh SSR Academy of Sciences.

Gadlet Andiyonovich Batyrbekov--deputy director of the Institute of Nuclear Physics of the Kazakh SSR Academy of Sciences.

Turganbay Nurlanovich Doszhanov--deputy director of the Institute of Zoology of the Kazakh SSR Academy of Sciences.

Viktor Ivanovich Drobzhev--director of the Institute of the Ionosphere of the Kazakh SSR Academy of Sciences.

Bayynkul Kaliyevich Kaliyev--senior scientific associate of the Institute of Linguistics of the Kazakh SSR Academy of Sciences.

Yuriy Fedorovich Martynov--senior scientific associate of the Institute of Experimental Biology of the Kazakh SSR Academy of Sciences.

Sofya Mironovna Shapiro--chief of a laboratory of the Institute of Hydrogeology and Hydrophysics imeni U.M. Akhmedsafin of the Kazakh SSR Academy of Sciences.

The Medal "For Labor Distinction"

Kaydar Seysembayevich Aldazhumanov--junior scientific associate of the Institute of History, Archeology, and Ethnography imeni Ch.Ch. Valikhanov of the Kazakh SSR Academy of Sciences.

Oleg Ivanovich Alekseyev--deputy chief scientific secretary of the Presidium of the Kazakh SSR Academy of Sciences.

Mekeriya Atimovich Atimov--senior scientific associate of the Institute of Literature and Art imeni M.I. Auezov of the Kazakh SSR Academy of Sciences.

Sultan Akhimovich Akhimov--chief of a department of the Presidium of the Kazakh SSR Academy of Sciences.

Larisa Yakovlevna Dmitruk--responsible secretary of the journal VESTNIK AKADEMII NAUK KAZAKHSKOY SSR.

Igor Vasilyevich Kalashnikov--junior scientific associate of the Institute of Soil Science of the Kazakh SSR Academy of Sciences.

Mikhail Timofeyevich Kobets--carpenter of a repair and construction section of the Kazakh SSR Academy of Sciences.

Valeriy Mikhaylovich Safronov--chief of a laboratory of the Institute of Organic Catalysis and Electrochemistry of the Kazakh SSR Academy of Sciences.

Marat Khusainovich Sayatov--chief of a laboratory of the Institute of Microbiology and Virology of the Kazakh SSR Academy of Sciences.

Karaganda Oblast

The Badge of Honor

Dzhantore Nurlanovich Abishev--academician secretary of the Central Kazakhstan Department of the Kazakh SSR Academy of Sciences.

For the Georgian SSR

The South Osetian Autonomous Oblast

The Badge of Honor

Bagrat Vissarionovich Tekhov--director of the South Osetian Scientific Research Institute of the Georgian SSR Academy of Sciences.



## Rayons and Cities of Republic Subordination

### The Order of Lenin

Sergey Simonovich Dzhikiya--chief of a department of the Institute of Oriental Studies imeni G.V. Tsereteli of the Georgian SSR Academy of Sciences.

### The Order of the October Revolution

Georgiy Aleksandrovich Melikishvili--director of the Institute of History, Archeology, and Ethnography imenu I.A. Dzhavakhishvili of the Georgian SSR Academy of Sciences.

Aleksandr Severyanovich Prangishvili--vice president of the Georgian SSR Academy of Sciences.

### The Order of Labor Red Banner

Andrey Melitonovich Apakidze--academician secretary of the Social Sciences Department of the Georgian SSR Academy of Sciences.

Vakhtang Shalvovich Dzhaoshvili--chief of a department of the Institute of Geography imeni Vakhushti Bagrationi of the Georgian SSR Academy of Sciences.

Tengiz Pavlovich Khositashvili--deputy president of the Georgian SSR Academy of Sciences.

Shalva Iosifovich Shengeliya--director of the Metsniyereba Publishing House of the Georgian SSR Academy of Sciences.

### The Order of Friendship of Peoples

Otar Davidovich Lordkipanidze--deputy director of the Institute of History, Archeology, and Ethnography imeni I.A. Dzhavakhishvili of the Georgian SSR Academy of Sciences.

Ramaz Mikhaylovich Sakandelidze--director of the Special Design Bureau of Scientific Instrument Making with a pilot works of the Georgian SSR Academy of Sciences.

### The Badge of Honor

Shota Aleksandrovich Adamiya--deputy director of the Geology Institute imeni A.I. Dzhanelidze of the Georgian SSR Academy of Sciences.

Gayana Vladimirovna Alibegashvili--chief of a department of the Institute of History of Georgian Art imeni G.N. Chubinashvili of the Georgian SSR Academy of Sciences.

Vladimir Ivanovich Bakhutashvili--deputy director of the Institute of Experimental Morphology imeni A.N. Natishvili of the Georgian SSR Academy of Sciences.

Tinatin Iosifovna Maruashvili--chief of a department of the Institute of Computational Mathematics imeni N.I. Muskhelishvili of the Georgian SSR Academy of Sciences.

Shota Aleksandrovich Nadirashvili--director of the Institute of Psychology imeni D.N. Uznadze of the Georgian SSR Academy of Sciences.

Georgiy Shalvovich Nakhutsrishvili--director of the Institute of Botany imeni N.N. Ketskhoveri of the Georgian SSR Academy of Sciences.

Tinatin Shalvovna Sanikidze--chief of the Foreign Languages Chair of the Georgian SSR Academy of Sciences.

Levan Aleksandrovich Chilashvili--director of the State Museum of Georgia imeni S.N. Dzhanelidze of the Georgian SSR Academy of Sciences.

Nodar Konstantinovich Chichinadze--deputy director of the Institute of Experimental Morphology imeni A.N. Natishvili of the Georgian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Engels Vagarshakovich Arytyunov--bookbinder of a printing plant of the Georgian SSR Academy of Sciences.

Aleksey Abramovich Dabrundashvili--horticulture worker of the Central Botanical Garden of the Georgian SSR Academy of Sciences.

Georgiy Nikolayevich Kupin--assembler of the Special Design Bureau of Scientific Instrument Making with a pilot works of the Georgian SSR Academy of Sciences.

Nikolay Georgiyevich Petriashvili--typesetter of a printing plant of the Georgian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Georgiy Alekseyevich Gudushauri--chief of the Department of Personnel and Graduate Studies of the Georgian SSR Academy of Sciences.

Tariel Dmitriyevich Dzhaniashvili--mechanic of the Institute of Control Systems of the Georgian SSR Academy of Sciences.

Tamaz Ivanovich Lezhava--deputy director of the Institute of Inorganic Chemistry and Electrochemistry of the Georgian SSR Academy of Sciences.

Gulizar Mamontovna Paksashvili--inspector of the Protocol Department of the Presidium of the Georgian SSR Academy of Sciences.

Zurab Vasilyevich Ukleba--administrator of affairs of the Georgian SSR Academy of Sciences.

Otar Tarasovich Khachidze--deputy director of the Institute of Plant Biochemistry of the Georgian SSR Academy of Sciences.

Nodar Levanovich Tzintsadze--deputy director of the Institute of Physics of the Georgian SSR Academy of Sciences.

Tsiala Iosifovna Chartolani--director of the Svanetskiy History and Ethnography Museum of the Georgian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Avtandil Varlamovich Gotsiridze--chief engineer of a pilot works of the Institute of Pharmaceutical Chemistry imeni I.G. Kutateladze of the Georgian SSR Academy of Sciences.

Zauri Iosifovich Gurgenidze--manager of a department of a pilot works of the Institute of Physical and Organic Chemistry imeni P.G. Melikishvili of the Georgian SSR Academy of Sciences.

Gulnazi Ilinichna Kiknadze--senior scientific associate of the Institute of Manuscripts imeni K.S. Kekelidze of the Georgian SSR Academy of Sciences.

Aleksandr Malakiyevich Kobakhidze--chief of a department of the Institute of Linguistics of the Georgian SSR Academy of Sciences.

Vakhtang Mikhaylovich Kokilashvili--senior scientific associate of the Tbilisi Mathematics Institute imeni A.M. Razmadze of the Georgian SSR Academy of Sciences.

Grigoriy Nikolayevich Margiani--chief of a department of the Institute of History, Archeology, and Ethnography imeni I.A. Dzhavakhishvili of the Georgian SSR Academy of Sciences.

Yuriy Kirillovich Melshvili--senior scientific associate of the Institute of Construction Mechanics and Seismic Stability imeni K.S. Zavriyev of the Georgian SSR Academy of Sciences.

Nodar Profokiyevich Mitagvariya--deputy director of the Institute of Physiology imeni I.S. Beritashvili of the Georgian SSR Academy of Sciences.

Ramin Maksimovich Ramishvili--chief of a laboratory of the Institute of History, Archeology, and Ethnography imeni I.A. Dzhavakhishvili of the Georgian SSR Academy of Sciences.

Tengiz Ippolitovich Sigua--deputy director of the Institute of Metallurgy imeni 50-letiya SSSR of the Georgian SSR Academy of Sciences.

Otar Antonovich Charkviani--chief of a department of the Institute of Control Systems of the Georgian SSR Academy of Sciences.

For the Azerbaijan SSR

Rayons and Cities of Republic Subordination

The Order of Lenin

Mamed Dzhafer Zeynal Abdul ogly Dzhaferov--academician secretary of the Literature, Language, and Art Department of the Azerbaijan SSR Academy of Sciences.

The Order of the October Revolution

Chingiz Mekhtiyevich Dzhuvarly--manager of a laboratory of the Institute of Physics of the Azerbaijan SSR Academy of Sciences.

The Order of Labor Red Banner

Mitat Teymur ogly Abasov--academician secretary of the Earth Sciences Department of the Azerbaijan SSR Academy of Sciences.

Pyusta Aziz Aga kyzy Azizbekov--director of the Museum of History of the Azerbaijan SSR Academy of Sciences.

Dzhalal Ali Rza ogly Aliyev--academician secretary of the Biological Sciences Department of the Azerbaijan SSR Academy of Sciences.

Nariman Aga-Kuli ogly Guliyev--vice president of the Azerbaijan SSR Academy of Sciences.

Khudu Surkhay ogly Mamedov--chief of a laboratory of the Institute of Inorganic and Physical Chemistry of the Azerbaijan SSR Academy of Sciences.

Shafayat Farkhad Radkevich ogly Mekhtiyev--chief of a department of the Institute of Geology imeni I.M. Gubkin of the Azerbaijan SSR Academy of Sciences.

Eldar Yunis ogly Salayev--president of the Azerbaijan SSR Academy of Sciences.

The Order of Friendship of Peoples

Maksud Isfandiyarovich Aliyev--chief of a laboratory of the Institute of Physics of the Azerbaijan SSR Academy of Sciences.

Sara Balabekovna Ashurbeyli--senior scientific associate of the Institute of History of the Azerbaijan SSR Academy of Sciences.

Vladimir Rodionovich Volobuyev--vice president of the Azerbaijan SSR Academy of Sciences.

Faramaz Gazanfar ogly Maksudov--academician secretary of the Physical, Technical, and Mathematical Sciences Department of the Azerbaijan SSR Academy of Sciences.

Imam Dashdemir ogly Mustafayev--director of the Institute of Genetics and Selection of the Azerbaijan SSR Academy of Sciences.

Bekir Akhmed ogly Nabiyev--director of the Museum of Azerbaijan Literature imeni Nizami of the Azerbaijan SSR Academy of Sciences.

Asaf Abbas-Kuli ogly Nadirov--chief scientific secretary of the Presidium of the Azerbaijan SSR Academy of Sciences.

Subkhi Gashum ogly Salayev--manager of a laboratory of the Institute of Geology imeni I.M. Gubkin of the Azerbaijan SSR Academy of Sciences.

Togrul Meymat ogly Shakhtakhtinskiy--director of the Institute of Theoretical Problems of Chemical Technology of the Azerbaijan SSR Academy of Sciences.

The Badge of Honor

Fatma-Guseun kyzy Abdulla-Zade--secretary of the party committee of the Azerbaijan SSR Academy of Sciences.

Urkhan Kyazim ogly Alekperov--director of the Institute of Botany imeni V.L. Komarov of the Azerbaijan SSR Academy of Sciences.

Akif Aga Mekhti ogly Ali-Zade--director of the Institute of Geology imeni I.M. Gubkin of the Azerbaijan SSR Academy of Sciences.

Bogdan Iosifovich Yesman--senior scientific associate of the Institute of Problems of Deep Petroleum and Gas Deposits of the Azerbaijan SSR Academy of Sciences.

Dzhangir Vagid ogly Kagramanov--director of the Republic Manuscript Collection of the Azerbaijan SSR Academy of Sciences.

Garash Ali ogly Madatov--chief of a department of the Institute of History of the Azerbaijan SSR Academy of Sciences.

Akhmed Akper ogly Makhmudov--director of the Institute of Economics of the Azerbaijan SSR Academy of Sciences.

Kyamil Ismail ogly Sadykhov--manager of a laboratory of the Institute of Additive Chemistry of the Azerbaijan SSR Academy of Sciences.

Isa Rzayevich Selimkhanov--chief of a laboratory of the Institute of History of the Azerbaijan SSR Academy of Sciences.

Nizami Mamed ogly Sulyemanov--director of the Kristall Special Design and Technological Bureau of Physical Metallurgy with a pilot plant of the Azerbaijan SSR Academy of Sciences.

Elmira Teymurovna Suleymanov--chief of a laboratory of the Institute of Petrochemical Processes imeni Yu.G. Mamedaliyev of the Azerbaijan SSR Academy of Sciences.

Mamedaga Sultanovich Sultanov--senior scientific associate of the Republic Manuscript Collection of the Azerbaijan SSR Academy of Sciences.

Bakhadir Guseyn ogly Tagiyev--chief of a laboratory of the Institute of Physics of the Azerbaijan SSR Academy of Sciences.

Nariman Dzhafarovich Tairov--chief of a laboratory of the Institute of Problems of Deep Petroleum and Gas Deposits of the Azerbaijan SSR Academy of Sciences.

Shamil Seyfulla ogly Fatullayev--chief of a department of the Institute of Architecture and Art of the Azerbaijan SSR Academy of Sciences.

Ayaz Adil ogly Efendiyev--chief of a laboratory of the Institute of Theoretical Problems of Chemical Technology of the Azerbaijan SSR Academy of Sciences.

Aktaya Abdul ogly Efendiyev--chief of a department of the Institute of History of the Azerbaijan SSR Academy of Sciences.

The Medal "For Labor Prowess"

Rashid Mamed ogly Abbasov--director of the Mardakyan Arboretum attached to the Institute of Botany imeni V.L Komarov of the Azerbaijan SSR Academy of Sciences.

Akif Gamid ogly Azizov--chief of a laboratory of the Institute of Petrochemical Processes imeni Yu.G. Mamedaliyev of the Azerbaijan SSR Academy of Sciences.

Faramaz Magerram ogly Asadov--director of the Prasadka Special Technological Bureau with a pilot works of the Institute of Additive Chemistry of the Azerbaijan SSR Academy of Sciences.

Natik Mamed ogly Atakishiyev--manager of a laboratory of the Institute of Physics of the Azerbaijan SSR Academy of Sciences.

Nariman Mekhti ogly Akhmedov--chief of a laboratory of the Institute of Zoology of the Azerbaijan SSR Academy of Sciences.

Arif Allakhyar ogly Gadzhayev--chief of a department of the Institute of Literature imeni Nizami of the Azerbaijan SSR Academy of Sciences.

Farkhat Movsum ogly Guseynov--senior inspector of a department of the Presidium of the Azerbaijan SSR Academy of Sciences.

Yevgeniy Vasilyevich Dmitriyev--senior scientific associate of the Institute of Physics of the Azerbaijan SSR Academy of Sciences.

Yashar Vagid ogly Karayev--deputy director of the Institute of Literature imeni Nizami of the Azerbaijan SSR Academy of Sciences.

Nizami Mustafa ogly Mamedov--chief of a department of the Institute of Philosophy of the Azerbaijan SSR Academy of Sciences.

Azhdar Akber ogly Medzhidov--chief of a laboratory of the Institute of Petrochemical Processes imeni Yu.G. Mamedaliyev of the Azerbaijan SSR Academy of Sciences.

Namik Nasrulla ogly Nasrullayev--director of the Kibernetika Special Design Bureau of the Institute of Cybernetics of the Azerbaijan SSR Academy of Sciences.

Petr Olegovich Smirnov--junior scientific associate of the Center of Scientific Information on the Social Sciences of the Azerbaijan SSR Academy of Sciences.

Vagif Medzhid ogly Farzaliyev--deputy director of the Institute of Additive Chemistry of the Azerbaijan SSR Academy of Sciences.

Farid Dzhabrail ogly Khanlarov--chairman of the united committee of trade unions of the Azerbaijan SSR Academy of Sciences.

Rasim Samed ogly Efendiyev--chief of a department of the Institute of Architecture and Art of the Azerbaijan SSR Academy of Sciences.

Sara Akhmedovna Efendiyeva--chief methods experts of the Department of Personnel and Graduate Studies of the Azerbaijan SSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Bakhruz Teymur ogly Abdullayev--senior scientific associate of the Institute of Linguistics imeni Nasimi of the Azerbaijan SSR Academy of Sciences.

Urfat Khanali ogly Agayev--deputy director of the Institute of Chloro-organic Synthesis of the Azerbaijan SSR Academy of Sciences.

Yashar Iskender ogly Alekserov--deputy secretary of the party committee of the Azerbaijan SSR Academy of Sciences.

Arif Dardail ogly Aliyev--chief of a laboratory of the Automated Control Systems Department of the Azerbaijan SSR Academy of Sciences.

Medzhid Rustam ogly Aliyev--chief of a laboratory of the Automated Control Systems Department of the Azerbaijan SSR Academy of Sciences.

Ali Ragim ogly Allakhverdiyev--manager of a laboratory of the Institute of Physiology imeni A.I. Karayev of the Azerbaijan SSR Academy of Sciences.

Khamed Bayram ogly Gezalov--manager of a laboratory of the Radiation Research Sector of the Azerbaijan SSR Academy of Sciences.

Leonid Adyyevich Dadashev--senior scientific associate of the Institute of Physics of the Azerbaijan SSR Academy of Sciences.

Musa Khanlar ogly Ilyasov--senior scientific associate of the Institute of Mathematics and Mechanics of the Azerbaijan SSR Academy of Sciences.

Imran Mamedshakh ogly Kadirov--scientific secretary of the Scientific Organization Department of the Presidium of the Azerbaijan SSR Academy of Sciences.

Lidiya Andreyevna Karchashkina--instrument control man of a pilot industrial plant of the Institute of Petrochemical Processes imeni Yu.G. Mamedaliyev of the Azerbaijan SSR Academy of Sciences.

Allakhshyukar Bakhlul ogly Kurbanov--chief of a department of the Institute of Oriental Studies of the Azerbaijan SSR Academy of sciences.

Igor Nikolayevich Malinin--fitter of the Selen Pilot Plant of the Institute of Physics of the Azerbaijan SSR Academy of Sciences.

Fazilya Ibragim kyzy Samedova--chief of a laboratory of the Institute of Petrochemical Processes imeni Yu.G. Mamedaliyev of the Azerbaijan SSR Academy of Sciences.

Dilgam Babir ogly Tagiyev--senior scientific associate of the Institute of Inorganic and Physical Chemistry of the Azerbaijan SSR Academy of Sciences.

Vanda Karlovna Urlovskaya--chief of a department of the Central Scientific Library of the Azerbaijan SSR Academy of Sciences.

Farkhad Rasul ogly Khalafov--chief of a laboratory of the Institute of Theoretical Problems of Chemical Technology of the Azerbaijan SSR Academy of Sciences.

Aleksandr Lvovich Shabalov--chief engineer of the Tellur Special Design Bureau of the Institute of Physics of the Azerbaijan SSR Academy of Sciences.

For the Lithuanian SSR

The Order of the October Revolution

Romanas Mikolovich Vishomirskis--director of the Institute of Chemistry and Chemical Technology of the Lithuanian SSR Academy of Sciences.

The Order of Labor Red Banner

Antanas Antanovich Gaydis--chief of a department of the Institute of Philosophy, Sociology, and Law of the Lithuanian SSR Academy of Sciences.



Algirdas Yustinovich Shilyeka--director of the Institute of Semiconductor Physics of the Lithuanian SSR Academy of Sciences.

The Order of Friendship of Peoples

Irena Styapovna Eytminavichyute--chief of a laboratory of the Institute of Zoology and Parasitology of the Lithuanian SSR Academy of Sciences.

The Badge of Honor

Albinas Nikodemovich Gulbinskas--deputy director of the Institute of Economics of the Lithuanian SSR Academy of Sciences.

Mifodiy Parmenovich Sapagovas--deputy director of the Institute of Mathematics and Cybernetics of the Lithuanian SSR Academy of Sciences.

Vitautas Kristiyonovich Eva--scientific secretary of the Institute of Physical and Technical Problems of Energetics of the Lithuanian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Yan Viktorovich Iatvis--driver of a vehicle of a motor transport enterprise of the Lithuanian SSR Academy of Sciences.

Mikdas-Algirdas Antanovich Petravichyus--mechanic and tool maker of a pilot plant of the Institute of Semiconductor Physics of the Lithuanian SSR Academy of Sciences.

Antanas Adomovich Ribikauskas--optician of the pilot plant of laser and electronic equipment of the Institute of Physics of the Lithuanian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Yadviga Yuozovna Ignatyeva--deputy chief scientific secretary of the Presidium of the Lithuanian SSR Academy of Sciences.

Yuozos Yonovich Martsinkyavichyus--director of the Central Library of the Lithuanian SSR Academy of Sciences.

Zigmantas Balevich Stasyavichyus--chief of a laboratory of the Institute of Botany of the Lithuanian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Vitautas Yonovich Ambrazas--senior scientific associate of the Institute of the Lithuanian Language and Literature of the Lithuanian SSR Academy of Sciences.

Ingrida Kostovna Korskayte--senior scientific associate of the Institute of History of the Lithuanian SSR Academy of Sciences.

Regina Aleksovna Poshkene--senior scientific associate of the Institute of Biochemistry of the Lithuanian SSR Academy of Sciences.

For the Moldavian SSR

The Order of the October Revolution

Vladimir Aleksandrovich Andrunakiyevich--vice president of the Moldavian SSR Academy of Sciences.

The Order of Labor Red Banner

Georgiy Vasilyevich Lazuryevskiy--senior scientific associate-consultant of the Institute of Chemistry of the Moldavian SSR Academy of Sciences.

The Order of Friendship of Peoples

Kharlampiy Grigoryevich Korba--director of the Institute of Language and Literature of the Moldavian SSR Academy of Sciences.

The Badge of Honor

Andrey Mikhaylovich Andriyesh--chief scientific secretary of the Presidium of the Moldavian SSR Academy of Sciences.

Dmitriy Vasilyevich Gitsu--academician secretary of the Physical, Technical, and Mathematical Sciences Department of the Moldavian SSR Academy of Sciences.

Semen Ivanovich Toma--academician secretary of the Biological and Chemical Sciences Department of the Moldavian SSR Academy of Sciences.

Feodos Ivanovich Furduy--director of the Institute of Zoology and Physiology of the Moldavian SSR Academy of Sciences.

Vladimir Ivanovich Tsaranov--director of the Institute of History imeni Ya.S. Grosul of the Moldavian SSR Academy of Sciences.

The Order of Labor Glory 2d Degree

Anatoliy Ivanovich Naumenko--mechanic of a pilot plant of the Institute of Applied Physics of the Moldavian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Fedor Aleksandrovich Skodigor--tractor driver of a scientific experimental base of the Moldavian SSR Academy of Sciences.

Ilya Petrovich Suvorikov--mechanic of the Center of the Automation of Scientific Research and Metrology of the Moldavian SSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Natalya Nikolayevna Balashova--deputy director of the Institute of Ecological Genetics of the Moldavian SSR Academy of Sciences.

Pavel Fedorovich Vlad--director of the Institute of Chemistry of the Moldavian SSR Academy of Sciences.

Nikolay Sergeyevich Danshin--deputy chairman of the Council for the Coordination of Scientific Research Work of the Moldavian SSR Academy of Sciences.

Fedor Gavrilovich Donika--director of the Special Design and Technological Bureau of Solid-State Electronics with a pilot works of the Institute of Applied Physics of the Moldavian SSR Academy of Sciences.

Vsevolod Ivanovich Markevich--chief of a sector of the Ethnography and Art Criticism Department of the Moldavian SSR Academy of Sciences.

Vasiliy Arkhipovich Nauk--chief of a laboratory of the Institute of Zoology and Parasitology of the Moldavian SSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Arkadiy Mitrofanovich Budyana--mechanic of instrumentation and automatic equipment of the Computer Center of the Institute of Mathematics with a computer center of the Moldavian SSR Academy of Sciences.

Ignat Konstantinovich Vragalev--leader of a brigade of mechanics of a pilot plant of the Institute of Applied Physics of the Moldavian SSR Academy of Sciences.

Mariya Aleksandrovna Komanesku--senior engineer-programmer of the Institute of Mathematics with a computer center of the Moldavian SSR Academy of Sciences.

Nikifor Viktorovich Kurka--sanitary engineering mechanic of the Maintenance Administration of the Moldavian SSR Academy of Sciences.

Fedor Feofanovich Ozirinchuk--fitter and tinsmith of a repair and finishing section of the Repair and Construction Administration of the Moldavian SSR Academy of Sciences.

Vera Fedorovna Paskal--senior scientific associate of the Institute of Economics of the Moldavian SSR Academy of Sciences.

Lyubov Idelevna Fortysh--typesetter of a printing plant of the Shtiintsa Publishing House of the Moldavian SSR Academy of Sciences.

Grigoriy Gavrilovich Yancha--driver of a vehicle of the fleet of the Moldavian SSR Academy of Sciences.

For the Latvian SSR

The Order of Lenin

Vitold Antonovich Latishenko--director of the Institute of Polymer Mechanics of the Latvian SSR Academy of Sciences.

The Order of the October Revolution

Roman Yanovich Karklin--director of the experimental plant of biochemical preparations of the Institute of Microbiology imeni A. Kirkhenshteyn of the Latvian SSR Academy of Sciences.

The Order of Labor Red Banner

Yuriy Adamovich Bankovskiy--chief of a laboratory of the Institute of Inorganic Chemistry of the Latvian SSR Academy of Sciences.

Martin Yekabovich Beker--deputy director of the Institute of Microbiology imeni A. Kirkhenshteyn of the Latvian SSR Academy of Sciences.

Elmar Yanovich Gren--chief of a laboratory of the Institute of Organic Synthesis of the Latvian SSR Academy of Sciences.

Bruno Andreyevich Purin--president of the Latvian SSR Academy of Sciences.

The Order of Friendship of Peoples

Andrey Robertovich Valdman--manager of a laboratory of the Institute of Biology of the Latvian SSR Academy of Sciences.

Vasily Vasilyevich Doroshenko--senior scientific associate of the Institute of History of the Latvian SSR Academy of Sciences.

The Badge of Honor

Uldis Ernestovich Viyestur--chief of a laboratory of the Institute of Microbiology imeni A. Kirkhenshteyn of the Latvian SSR Academy of Sciences.

Petr Vatslavovich Gulyan--deputy director of the Institute of Economics of the Latvian SSR Academy of Sciences.

Vyacheslav Semenovitch Dorofeyev--chief engineer of the Institute of Physics of the Latvian SSR Academy of Sciences.

Ilza Gustavovna Ilzinya--chief of a laboratory of the Institute of Electronics and Computer Technology of the Latvian SSR Academy of Sciences.

Talis Niklasovich Miller--director of the Institute of Inorganic Chemistry of the Latvian SSR Academy of Sciences.

Ayna Yakovlevna Mutseniyetse--chief of a laboratory of the Institute of Microbiology imeni A. Kirkhenshteyn of the Latvian SSR Academy of Sciences.

Evald Khugovich Khermanis--chief of a laboratory of the Institute of Electronics and Computer Technology of the Latvian SSR Academy of Sciences.

Laymdot Krishyanovich Tseplitis--manager of a department of the Institute of Language and Literature imeni A. Upit of the Latvian SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Larisa Vasilyevna Loboda--instrument control man of an experimental plant of the Institute of Organic Synthesis of the Latvian SSR Academy of Sciences.

Marta Vilgelmovna Fedorova--instrumental control man of the experimental plant of biochemical preparations of the Institute of Microbiology imeni A. Kirkhenshteyn of the Latvian SSR Academy of Sciences.

The Medal "For Labor Prowess"

Miyervaldis Petrovich Vayvar--chief of the Scientific Organization Department and deputy chairman of the Council for the Coordination of Scientific Activity of the Latvian SSR Academy of Sciences.

Yan Yanovich Veysh--deputy director of the Institute of Philosophy and Law of the Latvian SSR Academy of Sciences.

Dmitriy Dmitriyevich Dobryakov--scientific secretary of the Physics and Power Engineering Institute of the Latvian SSR Academy of Sciences.

Ivan Grigoryevich Zhigun--senior scientific associate of the Institute of Polymer Mechanics of the Latvian SSR Academy of Sciences.

Evald Stanislavovich Mugurevich--chief of a department of the Institute of History of the Latvian SSR Academy of Sciences.

Leonid Petrovich Stafetskiy--director of the Special Design and Technological Bureau of Inorganic Materials of the Institute of Inorganic Chemistry of the Latvian SSR Academy of Sciences.

Uldis Arnoldovich Ulmanis--chief of a laboratory of the Institute of Physics of the Latvian SSR Academy of Sciences.

Yan Aleksandrovich Yanov--chief of a sector of the Institute of Economics of the Latvian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Zenta Karlovna Alksne--senior scientific associate of the Radio Astrophysics Observatory of the Latvian SSR Academy of Sciences.

Aleksandr Yevgenyevich Bogdanovich--senior scientific associate of the Institute of Polymer Mechanics of the Latvian SSR Academy of Sciences.

Int Zhanovich Vinkaln--scientific secretary of the Institute of Physics of the Latvian SSR Academy of Sciences.

Mikhail Ivanovich Kaltygin--chief of a laboratory of the Institute of Electronics and Computer Technology of the Latvian SSR Academy of Sciences.

Yanis Arturovich Kikuts--chief of a laboratory of the Institute of Electronics and Computer Technology of the Latvian SSR Academy of Sciences.

Arvid Yanovich Kulkevits--director of a special design and technological bureau of the Institute of Wood Chemistry of the Latvian SSR Academy of Sciences.

Yuriy Yanovich Mazur--senior scientific associate of the Physics and Power Engineering Institute of the Latvian SSR Academy of Sciences.

Dzidra Alfredovna Riyeksta--senior scientific associate of the Botanical Garden of the Latvian SSR Academy of Sciences.

For the Kirghiz SSR

Rayons and Cities of Republic Subordination

The Order of Labor Red Banner

Suyun Karimovich Kerimbayev--senior scientific associate of the Institute of History of the Kirghiz SSR Academy of Sciences.

The Order of Friendship of Peoples

Petr Alekseyevich Gan--deputy director of the Institute of Biology of the Kirghiz SSR Academy of Sciences.

The Badge of Honor

Kulubek Dzhoomartovich Bokonbayev--chief of a laboratory of the Institute of Geology imeni M.M. Adyshev of the Kirghiz SSR Academy of Sciences.

Eduard Eduardovich Makovskiy--director of the Institute of Automation of the Kirghiz SSR Academy of Sciences.

Vyacheslav Mikhaylovich Monin--lathe operator of the Institute of Automation of the Kirghiz SSR Academy of Sciences.

The Medal "For Labor Prowess"

Lyudmila Ivanovna Mikhyutina--director of a printing plant of the Kirghiz SSR Academy of Sciences.

Saltanat Osmonaliyeva--senior scientific associate of the Institute of Inorganic and Physical Chemistry of the Kirghiz SSR Academy of Sciences.

Mukhamed Yasyzovich Sushanlo--chief of the Oriental Studies Department of the Kirghiz SSR Academy of Sciences.

Roza Sheraliyeva--senior instructor of the Philosophy Chair of the Institute of Philosophy and Law of the Kirghiz SSR Academy of Sciences.

The Medal "For Labor Distinction"

Mikhail Seliverstovich Doronin--engineer of the Ananyevo Seismic Station of the Institute of Seismology of the Kirghiz SSR Academy of Sciences.

For the Tajik SSR

Rayons and Cities of Republic Subordination

The Order of the October Revolution

Khamid Khusenovich Mansurov--director of the Institute of Gastroenterology of the Tajik SSR Academy of Sciences.

The Order of Labor Red Banner

Petr Mikhaylovich Solozhenkin--vice president of the Tajik SSR Academy of Sciences.

The Order of Friendship of Peoples

Mukhammad Sharifovich Shukurov--chief of a department of the Institute of Language and Literature imeni A. Rudaka of the Tajik SSR Academy of Sciences.

The Badge of Honor

Karim Akhmedzhanovich Asrorov--chief of a laboratory of the Department of General Genetics of Cotton of the Tajik SSR Academy of Sciences.

Anvar Vakhobov--chief of a laboratory of the Institute of Chemistry imeni V.I. Nikitin of the Tajik SSR Academy of Sciences.

Nikolay Nikolayevich Kiselev--chief of a department of the Institute of Astrophysics of the Tajik SSR Academy of Sciences.

Leonid Mikhaylovich Lyskov--chief of a laboratory of the Institute of Seismic Resistant Construction and Seismology of the Tajik SSR Academy of Sciences.

The Order of Labor Glory 3d Degree

Mariya Ivanovna Kudinova--printer of a printing plant of the Donish Publishing House of the Tajik SSR Academy of Sciences.

Vasiliy Ivanovich Leonidov--copper smith and tinsmith of a special design and technological bureau of the Tajik SSR Academy of Sciences.

The Medal "For Labor Prowess"

Inom Asrorov--chief of a department of the Institute of Economics of the Tajik SSR Academy of Sciences.

Vakhob Akbarovich Bobodzhanov--chief of a laboratory of the Institute of Plant Physiology and Biophysics of the Tajik SSR Academy of Sciences.

Nazarali Khonaliyev--chief of a department of the Council for the Study of Productive Forces of the Tajik SSR Academy of Sciences.

Makhmudzhon Sharipov--junior scientific associate of the Institute of Zoology and Parasitology imeni Ye.N. Pavlovskiy of the Tajik SSR Academy of Sciences.

The Medal "For Labor Distinction"

Munir Baltukhanovich Akramov--chief of a laboratory of the Institute of Geology of the Tajik SSR Academy of Sciences.

Asaf Izrailovich Achildiyev--chief of a department of the Mathematics Institute with a computer center of the Tajik SSR Academy of Sciences.

Nina Georgiyevna Kaletkina--chief of a department of the Institute of Botany of the Tajik SSR Academy of Sciences.

Ikromiddin Mukhiddinov--chief of a sector of the Institute of History imeni A. Donish of the Tajik SSR Academy of Sciences.

For the Armenian SSR

The Order of Lenin

Aram Bagratovich Nalbandyan--director of the Institute of Chemical Physics of the Armenian SSR Academy of Sciences.

The Order of the October Revolution

Gevork Beglarovich Dzhaikyan--director of the Institute of Language imeni R. Acharyan of the Armenian SSR Academy of Sciences.

Radik Martirosovich Martirosyan--director of the Institute of Radio Physics and Electronics of the Armenian SSR Academy of Sciences.

The Order of Labor Red Banner

Guren Makarovich Ayraretyan--chief of a laboratory of the Institute of General and Inorganic Chemistry of the Armenian SSR Academy of Sciences.



Galust Anushavanovich Galoyan--academician secretary of the Armenian SSR Academy of Sciences.

#### The Order of Friendship of Peoples

Robert Yeremovich Sarkisyan--director of the Special Experimental Design Technological Institute of the Armenian SSR Academy of Sciences.

#### The Badge of Honor

Grach Mikayelovich Bartikyan--chief of a department of the Institute of History of the Armenian SSR Academy of Sciences.

Mayya Grantovna Indzhikyan--chief of a laboratory of the Institute of Organic Chemistry of the Armenian SSR Academy of Sciences.

Robert Ashotovich Sarkisyan--chief and chief designer of the Special Design Bureau of Radio Electronics Equipment of the Institute of Radio Physics and Electronics of the Armenian SSR Academy of Sciences.

#### The Order of Labor Glory 2d Degree

Albert Karapetovich Gabrielyan--typesetter of the Yerevan Printing Plant of the Armenian SSR Academy of Sciences.

Asatur Ovakimovich Yepremyan--lathe operator of a special design and technological bureau of the Byurakan Astrophysics Observatory of the Armenian SSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Roland Armenakovich Gevorkyan--leader of a brigade of instrument control men of a pilot plant of the Institute of General and Inorganic Chemistry of the Armenian SSR Academy of Sciences.

Nurik Gevorkovna Grigoryan--instrument control man of the special chemical pharmaceutical technological bureau of the Institute of Fine Organic Chemistry imeni A.L. Mndzhoyan of the Armenian SSR Academy of Sciences.

Pargev Melkonovich Muradyan--senior foreman of the Echmiadzin Printing Plant of the Armenian SSR Academy of Sciences.

Sergo Sarkisovich Pogosov--mechanic of the Institute of Microbiology of the Armenian SSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Georgiy Grigoryevich Abelyan--lathe operator of the Institute of Physics Research of the Armenian SSR Academy of Sciences.

Eleonora Tsolakovna Gabrielyan--senior scientific associate of the Institute of Botany of the Armenian SSR Academy of Sciences.

Gamlet Ambakumovich Gevorgyan--chief of a department of the Institute of Philosophy and Law of the Armenian SSR Academy of Sciences.

Karine Grachievna Manukyan--senior scientific associate of the Institute of Biochemistry of the Armenian SSR Academy of Sciences.

Ayrapet Gevorgovich Margaryan--senior scientific associate of the Institute of Oriental Studies of the Armenian SSR Academy of Sciences.

Yulya Armenakovich Martirosyan--junior scientific associate of the Institute of Geological Sciences of the Armenian SSR Academy of Sciences.

Anri Barsegovich Nersesyan--chief of a department of the Institute of Mathematics of the Armenian SSR Academy of Sciences.

The Medal "For Labor Distinction"

Eduard Mushegovich Arutyunyan--junior scientific associate of the Institute of Applied Problems of Physics of the Armenian SSR Academy of Sciences.

Kuli Ashoyevich Badoyan--worker of the Administration of Affairs of the Armenian SSR Academy of Sciences.

Zhora Saakovich Vaselyan--assembler of the Special Design Bureau of Radio Electronic Equipment of the Institute of Radio Physics and Electronics of the Armenian SSR Academy of Sciences.

Alvard Sarukhanovna Gaziyan--senior scientific associate of the Institute of Archeology and Ethnography of the Armenian SSR Academy of Sciences.

Eduard Oganessovich Muradyan--design engineer of a special design and technological bureau of the Institute of Mechanics of the Armenian SSR Academy of Sciences.

Sofya Ambartsumovna Petosyan--senior scientific associate of the Institute of Economics of the Armenian SSR Academy of Sciences.

Lyudmila Ivanovna Pogosyan--reviewer of the Byurakan Astrophysics Observatory of the Armenian SSR Academy of Sciences.

Akop Yefremovich Terteryan--chief of a laboratory of the Institute of Zoology of the Armenian SSR Academy of Sciences.

For the Turkmen SSR

The City of Ashkhabad

The Order of Labor Red Banner

Semen Romanovich Sergiyenko--chief of a laboratory of the Institute of Chemistry of the Turkmen SSR Academy of Sciences.

#### The Order of Friendship of Peoples

Fuat Fayzrahmanovich Sultanov--chief scientific secretary of the Presidium of the Turkmen SSR Academy of Sciences.

#### The Badge of Honor

Tachmet Ashirov--deputy director of the Institute of Seismology of the Turkmen SSR Academy of Sciences.

Sergey Petrovich Ivanov--driver of a vehicle of the united base of expeditionary motor transport of the Turkmen SSR Academy of Sciences.

Murad Orazkuliyevech Karryyev--chief of a laboratory of the Institute of Botany of the Turkmen SSR Academy of Sciences.

Baymukhammet Nuryyevich Nuryyev--senior scientific associate of the Institute of Deserts of the Turkmen SSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Amandurdy Berkeliyev--chief of a laboratory of the Physical Technical Institute of the Turkmen SSR Academy of Sciences.

Tagan Durdyyev--chief of a sector of the Institute of History imeni Sh. Batyrov of the Turkmen SSR Academy of Sciences.

Berdimurad Meredov--chief of a department of the Institute of Economics of the Turkmen SSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Vladimir Akimovich Kadyrov--senior scientific associate of the Philosophy and Law Department of the Turkmen SSR Academy of Sciences.

Svetlana Nikolayevna Myartseva--deputy director of the Institute of Zoology of the Turkmen SSR Academy of Sciences.

Vladimir Vasilyevich Shokin--senior scientific associate of the Solntse Scientific Production Association of the Turkmen SSR Academy of Sciences.

#### For the Estonian SSR

#### The Order of Labor Red Banner

Yulo Eristovich Lille--chief of a sector of the Institute of Chemistry of the Estonian SSR Academy of Sciences.

#### The Order of Friendship of Peoples

Endel Teodorovich Lippmaa--director of the Institute of Chemical and Biological Physics of the Estonian SSR Academy of Sciences.

Cheslav Bronislavovich Lushchik--chief of a sector of the Institute of Physics of the Estonian SSR Academy of Sciences.

Eduard Yukhanovich Ertis--director of the Literary Museum imeni F.R. Kreysvald of the Estonian SSR Academy of Sciences.

#### The Badge of Honor

Khillar Karlovich Aben--director of the Institute of Cybernetics of the Estonian SSR Academy of Sciences.

Ilya Zalmanovich Kaganovich--chief of a sector of the Institute of Economics of the Estonian SSR Academy of Sciences.

Yukhan Karlovich Ross--chief of a sector of the Institute of Astrophysics and Atmospheric Physics of the Estonian SSR Academy of Sciences.

Paul Ioannovich Tamkivi--deputy director of the Institute of Thermal Physics and Electrophysics of the Estonian SSR Academy of Sciences.

#### The Order of Labor Glory 3d Degree

Yaan Ioosepovich Ambos--leader of a brigade of mechanics of a special design bureau of the Estonian SSR Academy of Sciences.

#### The Medal "For Labor Prowess"

Kherbert Adovich Viyding--deputy director of the Institute of Geology of the Estonian SSR Academy of Sciences.

Raymo Nikolayevich Pullat--director of the Institute of History of the Estonian SSR Academy of Sciences.

Guydo Yukhanovich Rayalo--chief of a sector of the Institute of Chemistry of the Estonian SSR Academy of Sciences.

Khenn Kharaldovich Khaberman--chief of a sector of the Institute of Zoology and Botany of the Estonian SSR Academy of Sciences.

#### The Medal "For Labor Distinction"

Tiya Lembitovna Kopelma--electrician of the Special Design Bureau of Computer Technology of the Institute of Cybernetics of the Estonian SSR Academy of Sciences.

Mart Nikolayevich Rimmel--deputy director of the Institute of Language and Literature of the Estonian SSR Academy of Sciences.

Reyn Rudolfovich Teynberg--chief of a sector of the Institute of Experimental Biology of the Estonian SSR Academy of Sciences.

[Signed] Chairman of the Presidium of the USSR Supreme Soviet A. Gromyko

Secretary of the Presidium of the USSR Supreme Soviet T. Menteshashvili

Moscow, the Kremlin.

20 August 1986

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## AWARDS, PRIZES

### GOLD MEDALS, NOMINAL PRIZES OF ACADEMY OF SCIENCES FOR 1987

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 156-158

[Article under the rubric "News Items and Information": "Gold Medals and Nominal Prizes of the USSR Academy of Sciences in 1987"]

[Text] The USSR Academy of Sciences announces the competitions for gold medals and nominal prizes.

#### Gold Medals

The I.I. Mechnikov Gold Medal is awarded to Soviet and foreign scientists for outstanding scientific works in the field of microbiology, epidemiology, zoology, and the treatment of infectious diseases and for major scientific achievements in the field of biology (the deadline for submitting works is 15 February 1987).

The A.N. Tupolev Gold Medal with a prize of 2,000 rubles is awarded to Soviet scientists for outstanding works in the field of aeronautical science and engineering (the deadline for submitting works is 10 August 1987).

The S.O. Makarov Gold Medal is awarded to Soviet scientists for outstanding scientific research in the field of oceanology (the deadline for submitting works is 27 September 1987).

#### Nominal Prizes

(awarded to Soviet scientists in the about of 2,000 rubles each)

The I.I. Mechnikov Prize--for outstanding scientific works in the field of microbiology, epidemiology, zoology, and the treatment of infectious diseases and for outstanding scientific achievements in the field of biology (the deadline for submitting works is 15 February 1987).

The P.L. Chebyshev Prize--for the best works in the field of mathematics (the deadline for submitting works is 15 February 1987).

The A.A. Fridman Prize--for the best scientific works in the field of meteorology (the deadline for submitting works is 17 March 1987).

The A.A. Belopolskiy Prize--for outstanding works in astrophysics (the deadline for submitting works is 13 April 1987).

The N.N. Miklukho-Maklay Prize--for works in the field of general ethnography, the ethnography of Oceania and Southeast Asia, ethnic anthropology, and the geography of Pacific Ocean countries (the deadline for submitting works is 17 April 1987).

The P.P. Anosov Prize--for outstanding scientific works in the field of metallurgy, metal science, and the heat treatment of metals and alloys (the deadline for submitting works is 18 April 1987).

The A.P. Vinogradov Prize--for outstanding works in the field of the earth sciences (the deadline for submitting works is 21 May 1987).

The A.N. Severtsov Prize--for the best scientific works in the field of the evolutionary morphology of animals (the deadline for submitting works is 17 June 1987).

The V.A. Obruchev Prize--for the best scientific works in the field of the geology and geography of Asia (the deadline for submitting works is 10 July 1987).

The V.L. Komarov Prize--for the best works in the field of botany, taxonomy, the anatomy and morphology of plants, botanical geography, and paleobotany (the deadline for submitting works is 13 July 1987).

The A.F. Ioffe Prize--for the best scientific works in the field of physics (the deadline for submitting works is 11 August 1987).

The I.I. Polzunov Prize--for the best works in heat engineering and for new designs of heat engineering plants (the deadline for submitting works is 15 August 1987).

The M.V. Lomonosov Prize--for scientific research and discoveries in the field of physics (the deadline for submitting works is 19 August 1987).

The G.M. Krzhizhanovskiy Prize--for the best research in the field of power engineering and for the best scientific works in the field of the economic sciences (the deadline for submitting works is 22 September 1987).

#### General Provisions

For the purpose of giving incentives to scientists for outstanding scientific works and scientific discoveries and inventions, which are of great importance for science and practice, the USSR Academy of Sciences on the basis of the results of the competitions awards gold medals and prizes named after outstanding scientists.

The gold medals are awarded for outstanding scientific works, discoveries, and inventions or for a set of works of great scientific and practical importance;

only individuals can personally participate in the competitions for the gold medals.

The nominal prizes are awarded for the best individual scientific works, discoveries, and inventions, as well as for series of scientific works on a common theme; works, as a rule, of individual authors can be submitted for the prizes. In case of the submitting of collective works only the leading authors, but not more than three, are indicated.

The right to nominate candidates for the gold medals and prizes is granted to academicians and corresponding member of the USSR Academy of Sciences and the academies of sciences of the union republics, to scientific institutions, to higher educational institutions, to scientific and engineering and technical societies, to scientific and technical councils of state committees, ministries, and departments, to technical councils of industrial enterprises, to design bureaus, and to scientific councils of the USSR Academy of Sciences and other departments for the most important problems of science.

In case of the nomination of a candidate for a gold medal or prize it is necessary no later than 3 months prior to the date of awarding to submit to the USSR Academy of Sciences (117901 GSP, Moscow, V-71, Leninskiy prospekt, 14) with the inscription "For the...gold medal (prize)":

--a statement of justification, which includes a scientific description of the work and its importance for the development of science and the national economy;

--the published scientific work (series of works) and materials of the scientific discovery or invention in three copies;

--information on the author (a list of basic scientific works, discoveries, and inventions, the place of work and position held, home address).

Works, which have been awarded the Lenin Prize, the USSR State Prize, as well as nominal prizes of the academies of sciences of the union republics and sectorial academies, are not accepted for the gold medals and prizes named after outstanding scientists.

The right when publishing works to note in the title "Awarded the...Gold Medal (Prize) of the USSR Academy of Sciences for..." is granted to the scientists who have been awarded the gold medals and prizes.

Each of these medals and prizes is awarded once every 3 years, on a memorable date which is connected with the life and activity of the scientist by whose name the medal or prize has been designated.

The decisions of the Presidium of the USSR Academy of Sciences on the awarding of the gold medals and prizes, as well as brief annotations on the works, which have been awarded the gold medals or prizes, are published in VESTNIK AKADEMII NAUK SSSR and in IZVESTIYA AKADEMII NAUK SSSR of the appropriate series. Portraits of the scientists, who have been awarded the gold medals and prizes, are published in VESTNIK AKADEMII NAUK SSSR.



The printed scientific works, which have been examined at the meeting of the Presidium and for which the gold medals or prizes have been awarded, are turned over to the Library of the USSR Academy of Sciences for holding.

The gold medals, as well as the certificates on the awarding of the gold medals and prizes are presented at the annual General Assembly of the USSR Academy of Sciences (the first 10-day period of March).

Telephone inquiries: 237-70-05, 234-36-40.

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## BIOGRAPHIC INFORMATION

### NIKOLAY MIKHAYLOVICH DRUZHININ OBITUARY

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 p 76

[Article under the rubric "In Memory of Scientists": "Nikolay Mikhaylovich Druzhinin"]

[Text] Soviet science has suffered a grave loss. On 8 August 1986 Academician Nikolay Mikhaylovich Druzhinin, an outstanding Soviet scientist, one of the oldest figures of Soviet historical science, and winner of the Lenin and USSR State Prizes, died at the age of 100.

N.M. Druzhinin was born on 13 January 1886 in Kursk. During the years of his youth, while a student of Moscow University, he actively participated in the revolutionary movement. His aptitude for scientific research work appeared already during his university years. The talent of the scientist was completely revealed in Soviet times. He was one of the leading specialists in the field of the socioeconomic and political history of Russia of the 19th century and the author of many basic works on the history of the movement of the Decembrists and the Russian prerevolutionary peasantry.

N.M. Druzhinin was a talented educator and organizer of Soviet historical science. At Moscow State University imeni M.V. Lomonosov and the Institute of History of the USSR Academy of Sciences he established a large school of agrarian scientists and specialists in the history of the liberation movement in Russia.

A brilliant popularizer and promoter of Soviet historical science, N.M. Druzhinin was at the source of the establishment of the USSR Central Museum of the Revolution. He wrote popular scientific works which cultivate deep feelings of patriotism.

N.M. Druzhinin embodied the best qualities of the Soviet scientist-citizen. Inexhaustible creative energy, a great capacity for work, adherence to principles in the solution of scientific problems, and personal modesty won him the recognition and respect of the community at large.

All the many-sided activity of the scientist was connected with devoted service to the homeland and Soviet science.

The Communist Party and the Soviet Government appreciated the great services of N.M. Druzhinin, having awarded him with three Orders of Lenin, the Order of the October Revolution, two Orders of Labor Red Banner, the Order of Friendship of Peoples, the Badge of Honor, and medals.

The blessed memory of Nikolay Mikhaylovich Druzhinin, a scientist, citizen, and patriot, will remain in our hearts forever.

[Signed] M.S. Gorbachev, G.A. Aliyev, V.I. Vorotnikov, L.N. Zaykov, Ye.K. Ligachev, N.I. Ryzhkov, B.N. Yeltsin, M.V. Zimyanin, A.N. Yakovlev, A.P. Aleksandrov, G.A. Yagodin, V.A. Kotelnikov, P.N. Fedoseyev, Ye.P. Velikhov, V.A. Koptug, A.A. Logunov, Yu.A. Ovchinnikov, K.V. Frolov, A.L. Yanshin, V.A. Grigoryev, G.K. Skryabin, S.L. Tikhvinskiy, Yu.V. Bromley, M.P. Kim, I.I. Mints, A.L. Narochnitskiy, B.B. Piotrovskiy, B.A. Rybakov, A.M. Samsonov, Z.V. Udaltsova, S.S. Khromov

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BIOGRAPHIC INFORMATION

ALEKSANDR IOSIFOVICH SHALNIKOV OBITUARY

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 p 77

[Article under the rubric "In Memory of Scientists": "Aleksandr Iosifovich Shalnikov"]

[Text] On 6 September 1986 Academician Aleksandr Iosifovich Shalnikov, an outstanding experimental physicist and winner of three USSR State Prizes, died at the age of 81.

He devoted more than 60 years of continuous labor to work in the field of the physics of low temperatures, to the solution of technical problems of great state importance, to the development of domestic instrument making, to the organization of scientific institutions, and to the training of scientists. The combination of physical intuition, creative energy, and brilliant mastery of the technique of the experiment enabled him to develop and study the properties of a number of new physical objects, including extremely thin metal films and perfect crystals of solid helium. He obtained important results in the field of superconductor physics. These works opened new fields and directions of research in modern physics.

A.I. Shalnikov took an active part in the establishment of the Institute of Physical Problems of the USSR Academy of Sciences, at which he worked from its founding to his last days, organized the laboratory of low temperatures at Moscow State University imeni M.V. Lomonosov, and was the founder and continuous editor of the journal PRIBORY I TEKHNIKA EKSPERIMENTA.

A.I. Shalnikov trained numerous students, striving to convey to them not only knowledge and the ability to work, but also his own burning interest and most conscientious attitude toward the scientific truth.

The services of A.I. Shalnikov in the development of Soviet science and his contribution to the technical progress of our homeland were commended by many orders and medals.

The memory of Aleksandr Iosifovich Shalnikov will remain forever in the hearts of those who knew him.

[Signed] The Presidium of the USSR Academy of Sciences, the General Physics and Astronomy Department of the USSR Academy of Sciences, the Institute of Physical Problems of the USSR Academy of Sciences

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## BIOGRAPHIC INFORMATION

ALEKSANDR MIKHAYLOVICH PROKHOROV

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 99-100

[Article under the rubric "News Items and Information": "Academician A.M. Prokhorov Is Twice Hero of Socialist Labor"]

[Text] For outstanding services in the development of physical science and the training of scientists and in connection with his 70th birthday Hero of Socialist Labor Academician Aleksandr Mikhaylovich Prokhorov by the Ukase of the Presidium of the USSR Supreme Soviet of 10 July 1986 was awarded the Order of Lenin and a second Hammer and Sickle Medal. In commemoration of the labor feats of A.M. Prokhorov his bronze bust will be erected in Moscow.

A.M. Prokhorov is a most prominent scientist, who has made an outstanding contribution to the development of modern physics. His works marked the beginning of a fundamentally new direction of science--quantum radiophysics and quantum electronics. The harmonious combination of basic and applied research is characteristic of his outstanding works on solid-state physics, radiophysics, and radiospectroscopy.

He is combining fruitful scientific work with diverse scientific organizational activity as a member of the Presidium of the USSR Academy of Sciences, academician secretary of the General Physics and Astronomy Department of the USSR Academy of Sciences, editor in chief of "Bolshaya Sovetskaya Entsiklopediya" [The Large Soviet Encyclopedia], director of the Institute of General Physics of the USSR Academy of Sciences, and chairman of the National Committee of Soviet Physicists. A broad scientific outlook, a permanent sense of what is new, and uncompromisingness in settling fundamental issues in combination with warmth and benevolence, unaffectedness and sensitivity in treating associates determine the success in the organization of basic physics and astronomy research on the scale of the entire country and in the accomplishment of urgent tasks of scientific and technical progress by the development of the scientific principles of new directions of engineering and technology. A number of complex problems, which are of great scientific and technical importance, were successfully solved owing to the innovative approach of A.M. Prokhorov to the development of physics and astronomy.

He is devoting much effort and attention to the training of personnel of the highest skills. The large detachment of his students formed the large and authoritative school of Soviet physicists.

A Lenin and State Prize winner, A.M. Prokhorov also has extensive international recognition. He was awarded the Nobel Prize in Physics, has been elected a member of many foreign academies and scientific societies, and has been awarded orders of the socialist countries and honorary diplomas.

In the salutatory address which was sent to A.M. Prokhorov, who is greeting his birthday at the peak of his creative abilities, the Presidium of the USSR Academy of Sciences wished him happiness, health, and great successes in scientific and scientific organizational activity for the good of our homeland.

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## BIOGRAPHIC INFORMATION

ANDREY VIKTOROVICH GAPONOV-GREKHOV

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 100-101

[Article under the rubric "News Items and Information": "Academician A.V. Gaponov-Grekhov Is a Hero of Socialist Labor"]

[Text] For great services in the development of physical science and the training of scientists and in connection with his 60th birthday the title of Hero of Socialist Labor was conferred on Academician Andrey Viktorovich Gaponov-Grekhov by the Ukase of the Presidium of the USSR Supreme Soviet of 6 June 1986 with the presentation to him of the Order of Lenin and the Hammer and Sickle Gold Medal.

The winner of USSR State Prizes, A.V. Gaponov-Grekhov is an outstanding Soviet radiophysicist and a worthy successor of the domestic radiophysics school of L.I. Mandelshtam, A.A. Andronov, and S.E. Khaykin.

A number of most difficult problems of the general theory of electromechanical systems were solved already in his candidate dissertation, and for this work the academic degree of doctor of physical mathematical sciences was simultaneously awarded to him. He made a large contribution to the study of electromagnetic shock waves in ferrites and ferroelectrics. In the 1960's he developed cyclotron resonance masers--electronic instruments of a new class with record parameters in the millimeter and submillimeter bands of wavelengths.

But high-power electronics far from exhausts the interests of A.V. Gaponov-Grekhov. A broad scientific outlook and a heightened sense of what is new were also characteristic of him. He and his associates and students performed important work, which in many respects leads foreign work, in the area of hydrophysics and the acoustics of the ocean, the theory of nonlinear waves and stochastic processes, plasma physics, relativistic microwave electronics, quantum electronics, and nonlinear optics.

A.V. Gaponov-Grekhov is successfully combining diverse scientific work with scientific organizational, teaching, and public activity. His organizing abilities came to light at the Scientific Research Institute of Radiophysics, where for a long time he was deputy director, and especially vividly in the position of director of the Institute of Applied Physics of the USSR Academy



of Sciences, where under his supervision the most important problems of various sectors of the national economy are being successfully solved.

He is devoting much attention to the training of highly skilled scientists at Gorkiy University and Gorkiy Polytechnical Institute.

The Presidium of the USSR Academy of Sciences sent the celebrator a salutatory address, in which it noted his scientific services and wished him good health, happiness, and new successes for the good of Soviet science.

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BIOGRAPHIC INFORMATION

ALEKSANDR FEDOROVICH BELOV

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 p 101

[Article under the rubric "News Items and Information": "Academician A.F. Belov Is 80 Years Old"]

[Text] The name of Hero of Socialist Labor and winner of the Lenin Prize and USSR State Prizes Aleksandr Fedorovich Belov, a prominent Soviet metallurgy scholar, is inseparably connected with the establishment of the domestic industry for the production of light and special alloys for the aviation and other sectors of technology and the national economy. He covered the long path from engineer to director of one of the most prominent metallurgical combines of the country, then chief of a main administration of a ministry.

On the initiative of A.F. Belov the All-Union Institute of Light Alloys, which he headed until recently, was established. Under his supervision basic physical chemical research was conducted and engineering solutions, which are connected with the development of new technological processes, which are based on the fast crystallization of metallic melts and high-temperature isostatic processing, diffusion welding, and isothermal stamping, which increases significantly the qualitative characteristics of metal, were developed. He is one of the developers of a new process--granular metallurgy. These works are contributing to the further development of aircraft engine building and the aircraft industry in general.

A.F. Belov is performing much scientific organizational, teaching, and public work. He is editor in chief of the journal IZVESTIYA AKADEMII NAUK SSSR, SERIYA METALLY and chief of a chair of the Moscow Aviation Institute. He was a deputy of the 25th and 26th CPSU Congresses.

The Presidium of the USSR Academy of Sciences sent the celebrator a salutatory address, in which it noted his scientific services and wished him good health and many years of fruitful work for the good of our homeland.

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## BIOGRAPHIC INFORMATION

SERGEY TIMOFEYEVICH KISHKIN

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 87 pp 101-102

[Article under the rubric "News Items and Information": "Academician S.T. Kishkin Is 80 Years Old"]

[Text] The development of aviation materials technology in our country is inseparably connected with the name of Academician Sergey Timofeyevich Kishkin--a prominent materials technology scholar, three-time winner of the USSR State Prize, and twice winner of the prize of the USSR Council of Ministers. His scientific interests encompass a wide range of problems of structural strength, the physics of metals, and the development of high-strength steels and high-temperature alloys.

It is difficult to overestimate the contribution of S.T. Kishkin to the achievements of the domestic aircraft industry and engine building. He has been working for more than 50 years at the All-Union Institute of Aviation Materials, of them nearly 40 years have been as first deputy chief for the science section. He is by right considered one of the founders of this most prominent sectorial scientific center, which is well known in our country and abroad.

The talent of S.T. Kishkin as a researcher and engineer came to light back in the 1930's. During this period jointly with N.M. Sklyarov he developed a series of armor steels for combat aircraft, as well as a technologically effective aircraft armor for the fuselage of the well-known IL-2 attack plane. In the early 1940's for the first time in the world the new 30KhGSHA high-strength steel, which was developed under the supervision of S.T. Kishkin and in strength surpasses by 1.5-fold the steel used for these purposes in the United States, was used for the propulsion units of the MIG-15. The production in the 1950's of turbine blades made of original alloys, which were developed by S.T. Kishkin and his associates, by the method of precision casting instead of stamping made it possible to lead for at least 5 years the United States both in the level of heat resistance and in the economy of items.

S.T. Kishkin developed the theory of the multicomponent alloying of high-temperature alloys. High-temperature alloys with increased indicators of heat resistance, from which at present the blades of the turbines of practically

all domestic aircraft engines are being produced, are being developed on its basis.

S.T. Kishkin is devoting much attention to the development of new research methods. By the early 1940's the method of physical chemical phase analysis, by the use of which he discovered the phenomenon of the disintegration of martensite in case of static and cyclic plastic deformation, had been developed under his supervision. This had a considerable influence not only on the theory and practice of aviation materials technology, but also on the general theory of strength and plasticity.

Under the supervision of S.T. Kishkin methods of electron microscope autoradiography were developed and integrated methods of thermal physics studies of the phase state, the method of radioisotopes as applied to the study of the processes of the diffusion and chemical heterogeneity of the structure of metals, and others underwent extensive development.

S.T. Kishkin is devoting much attention to the training of highly skilled specialists in aviation materials technology. For many years he was in charge of the Chair of Materials Technology at the Moscow Aviation Institute.

In the positions of deputy academician secretary of the Physical Chemistry and Technology of Inorganic Materials Department of the USSR Academy of Sciences and chairman of the Scientific Council of the USSR Academy of Sciences for Construction Materials for New Equipment S.T. Kishkin is performing much scientific organizational work.

In the salutatory address, which was sent to the celebrator, the Presidium of the USSR Academy of Sciences wished him good health for many years and new creative accomplishments in the name of the further flourishing of Soviet science and technology.

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## BIOGRAPHIC INFORMATION

IVAN LYUDVIGOVICH KNUNYANTS

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 87 p 103

[Article under the rubric "News Items and Information": "Academician I.L. Knunyants Is 80 Years Old"]

[Text] For services to the Soviet Army, the contribution to the development of chemical science, and the training of scientists and in connection with his 80th birthday Academician Major General Ivan Lyudvigovich Knunyants by the Ukase of the Presidium of the USSR Supreme Soviet of 3 June 1986 was awarded the Order of Labor Red Banner.

The basic research of I.L. Knunyants, a Hero of Socialist Labor and winner of the Lenin Prize and USSR State Prizes, in the field of the chemistry of heterocycles, organophosphorus and organosulfur compounds, monomers, and polymers, physiologically active substances, and medicinal preparations is well known in our country and abroad. The name of the scientist is inseparably connected with the development of the chemistry of organofluoric compounds. He established the domestic school of organofluoric chemists, which by right holds one of the leading places in the world.

I.L. Knunyants made a substantial contribution to the organization of the domestic industry of organofluoric compounds, high molecular substances, and medicinal preparations. He developed and introduced original methods of the synthesis of antimalarial and anticancer preparations, discovered the polymerization of caprolactam, developed an advanced method of the synthesis of adipodinitrile, formulated the scientific principles of the synthesis of organofluoric compounds, and obtained numerous fluorine-containing materials, which found application in various fields of new technology, including surfactants, synthetic blood substitutes, and others.

The contribution of I.L. Knunyants to the training of scientists and engineering and technological personnel is invaluable. Among his students are academicians and doctors and candidates of sciences. His literary and editorial activity, which are of great importance for the development and popularization of science, is well known. He is also performing much scientific organizational work. The uncompromisingness in the defense of scientific truth, the creative abilities, and temperament of I.L. Knunyants have won the respect of his colleagues.

The Presidium of the USSR Academy of Sciences sent the celebrator a salutatory address, in which it noted his scientific achievements and services and wished him good health, happiness, and further successes for the good of the homeland.

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## BIOGRAPHIC INFORMATION

GADZHI GAMZATOVICH GAMZATOV

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 103-104

[Article under the rubric "News Items and Information": "Corresponding Member of the USSR Academy of Sciences G.G. Gamzatov Is 60 Years Old"]

[Text] For services in the development of philological science and in connection with his 60th birthday Corresponding Member of the USSR Academy of Sciences Gadzhi Gamzatovich Gamzatov by the Ukase of the Presidium of the USSR Supreme Soviet of 30 April 1986 was awarded the Order of Labor Red Banner.

G.G. Gamzatov is a well-known specialist in the field of the history of the literatures of the peoples of the USSR and the problems of modern literary criticism. The major studies "Formirovaniye mnogonatsionalnoy literaturnoy sistemy v dorevolutsionnom Dagestane" [The Formation of the Multinational Literary System in Prerevolutionary Dagestan] and "Literatura narodov Dagestana dooktyabrskogo perioda. Tipologiya i svoeobrazie khudozhestvennogo opyta" [The Literature of the Peoples of Dagestan of the Pre-October Period. The Typology and Uniqueness of the Artistic Experience], in which the questions of the formation and development of the literatures of the peoples of the Northern Caucasus, their interaction and mutual enrichment, and the link with the literary process of the country and the problems of the general and the particular in national literatures received thorough coverage, belong to him. These works make a significant contribution to domestic philology and the international patriotic education of the Soviet people.

In the book "Khudozhestvennoye nasledie i sovremennost" [Artistic Legacy and the Present] he characterized the importance of creative traditions in the development of national literatures and their place in the development and enrichment of the spiritual life of the peoples of the USSR and studied the problem of the increase of the role of socialist culture in the modern world. The latest monographic work of G.G. Gamzatov, "Preodoleniye. Stanovleniye. Obnovleniye" [Overcoming. Formation. Renewal], is a multidimensional study, in which the regularities of the paths of the formation of Soviet literature under the specific conditions of a multinational region and in the broad context of the history and culture of its peoples are identified.

G.G. Gamzatov is successfully combining creative activity with much scientific organizational work. For a number of years he has been in charge of the

Institute of History, Language, and Literature imeni G. Tsadasa of the Dagestan Affiliate of the USSR Academy of Sciences, has been carrying out the supervision of studies of an integrated, theoretical, and literary history nature, and has been a member of the Committee for Republic Prizes in Literature and Art. He is devoting much effort and knowledge to the matter of the training of young philology specialists and the cultivation in them of great integrity, socialist internationalism, fraternal friendship, and Soviet patriotism.

He is also known as an active public figure, who steadfastly defends the positions and achievements of Soviet science abroad.

In the salutatory address the Presidium of the USSR Academy of Sciences wished the celebrator good health and new creative successes for the good of science.

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## BIOGRAPHIC INFORMATION

ALEKSANDR STEPANOVICH KHOKHLOV

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 11, Nov 86 pp 104-105

[Article under the rubric "New Items and Information": "Corresponding Member of the USSR Academy of Sciences A.S. Khokhlov Is 70 Years Old"]

[Text] For services in the development of chemical science and the training of scientists and in connection with his 70th birthday Corresponding Member of the USSR Academy of Sciences Aleksandr Stepanovich Khokhlov by the Ukase of the Presidium of the USSR Supreme Soviet of 4 July 1986 was awarded the Order of Labor Red Banner.

The works of outstanding bioorganic chemist A.S. Khokhlov in the field of the chemistry of antitumor substances, antibiotics, and hormones are well known in the Soviet Union and abroad. Sarcolysine, which was synthesized by him, has been come firmly established in medical practice, and is being successfully used for the treatment of seminoma of the reticulosarcomas, Ewing's sarcoma, and other malignant formations, is an achievement of vital importance. He performed important research on the chemistry and biochemistry of a number of most important antibiotics: chloramphenicol, penicillins, polymyxins, and streptotricyns, which made it possible to obtain fundamentally new data. The research is connected with the isolation of new antibiotics and the ascertainment of their structure, as well as with the study of the means of the biosynthesis of a number of important antibiotics and the mechanism of their effect. The works completed by the scientist are also devoted to the chemistry of protein-peptide substances--nisin, actinoxanthine, hypophysial hormones, and interferon. The research of A.S. Khokhlov on microbic autoregulators is internationally recognized.

The scientist is devoting constant attention to the training of highly skilled specialists. His scientific organizational activity as deputy chief scientific secretary of the Presidium of the USSR Academy of Sciences and chairman of the Scientific Council of the USSR Academy of Sciences for Problems of Bioorganic Chemistry is fruitful.

In the salutatory address sent to the celebrator the Presidium of the USSR Academy of Sciences noted his scientific services and wished him good health and new creative successes for the glory of Soviet science.

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